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THE UNIVERSITY OF MICHIGAN MAY 18 198

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service and World Agricultural Outlook Board

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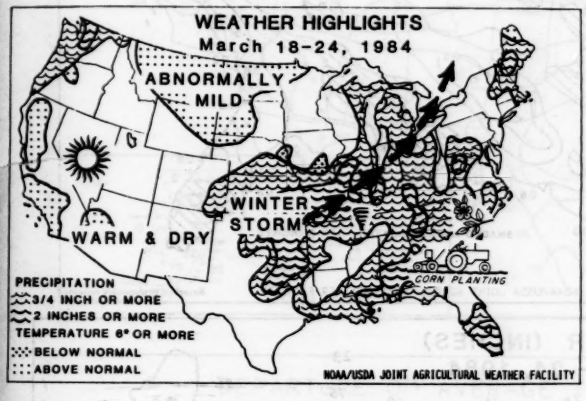
National Weather Summary

March 18 to 24



HIGHLIGHTS: Stormy weather dominated the area from the central and southern Plains into New England. Heavy rains were dumped from eastern Kansas to northeast Texas and northeastward into Missouri, while some deep snows piled up from eastern Colorado into parts of the Great Lakes region. Near blizzard conditions developed over the Great Lakes to New England, and strong northwesterly winds extended southward through the Carolinas. Sunny, dry weather remained over the Southwest; even the Pacific Northwest was drier than usual. It was cold over the central part of the Nation, and abnormally warm over the West and northern Plains.

SUNDAY...A vigorous, late-season storm crossing the Texas Panhandle into Oklahoma battered much of the Plains. It produced widespread snow, sleet, freezing rain, and wind from Colorado to Illinois. Over a foot of snow was dumped on parts of the central Plains, while heavy rains deluged the area from central Missouri to northwest Arkansas. South of the storm, the mercury soared to 96 degrees at Cotulla in South Texas. Light precipitation fell from the Carolinas to Maine and along the Pacific Northweat coast.

MONDAY...The storm slowly moved into the middle Mississippi Valley, producing freezing rain and snow from the east-central Plains to the Great Lakes, tornadoes around the Missouri Bootheel, and heavy rains southward to the central Gulf coast. Rains were scattered across New England and the Pacific Northwest.

TUESDAY...Widespread precipitation moistened most of the eastern third of the Nation as the storm continued to deepen and move into the Midwest. Snow piled up from Iowa to Wisconsin, while severe thunderstorms produced heavy rain over much of the Southeast. This first day of spring brought 90 degrees readings into some of the southern California deserts as winter continued its grip on the western Great Lakes region and from the Midwest into New England.

WEDNESDAY...The strong storm slowly drifted into the upper Midwest, triggering widespread precipitation over the Northeast, and blustery winds from the Mississippi Valley eastward to the Atlantic Coast. Heavy snow and near blizzard conditions hung over parts of the Great Lakes region. Another wet, windy storm moved into the West.

THURSDAY...The northeastern storm continued the winter weather and near blizzard conditions from the Great Lakes into New England, and blustery winds southward through the Carolinas. The western storm intensified over the southern Rockies, bringing rain and snow to the central Rockies and west-central Plains wheatlands. Severe thunderstorms, with heavy rain and hail, developed over parts of southwestern Olkahoma and north-central Texas.

FRIDAY...Stormy weather continued over portions of the central and southern Plains, benefitting the drier, western wheatlands. Heavy rain and thunderstorms drenched the area from eastern Kansas into north-central Texas, while snow fell westward to the foothills of the Rockies. Strong, west and northwest winds from the dominating storm early in the week continued to rake the Northeast.

(continued on p. 19)

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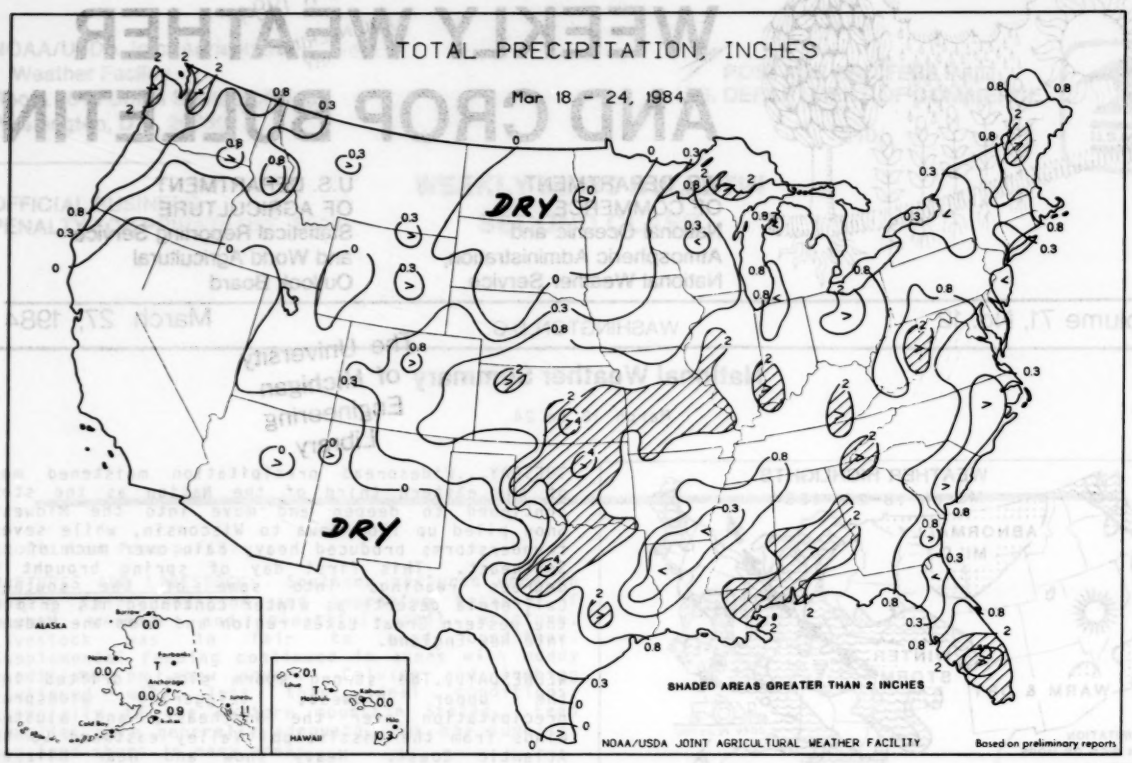
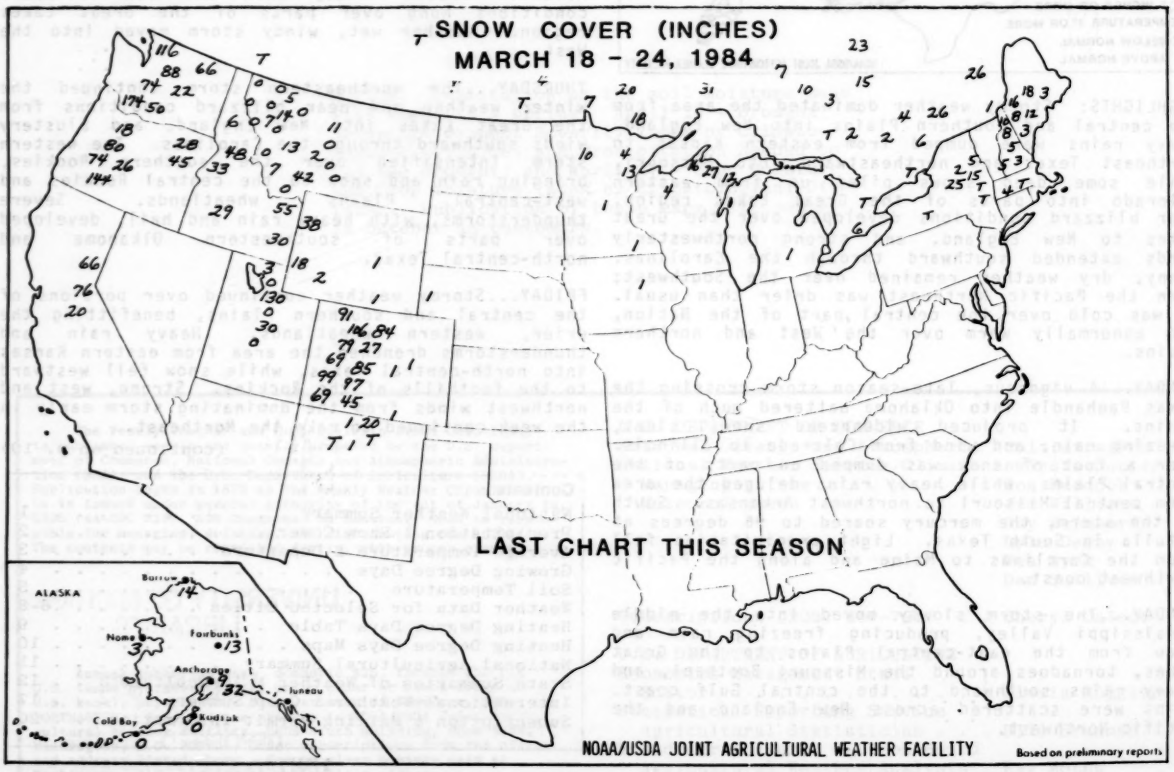
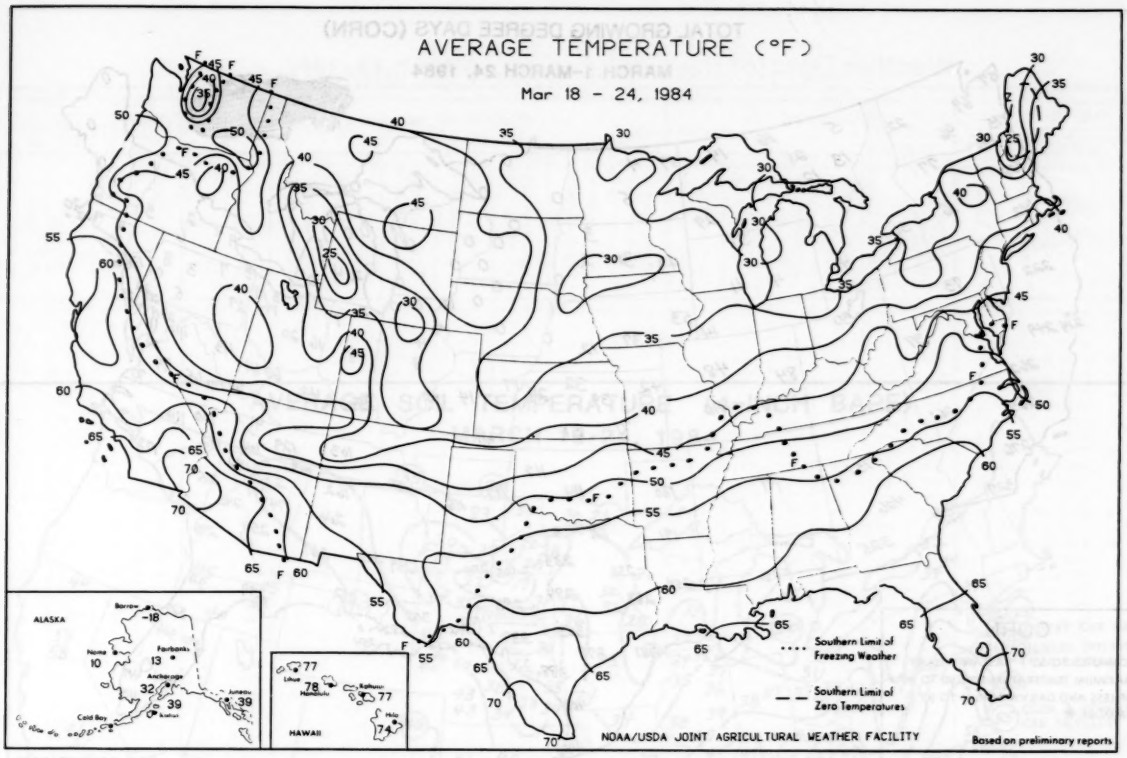
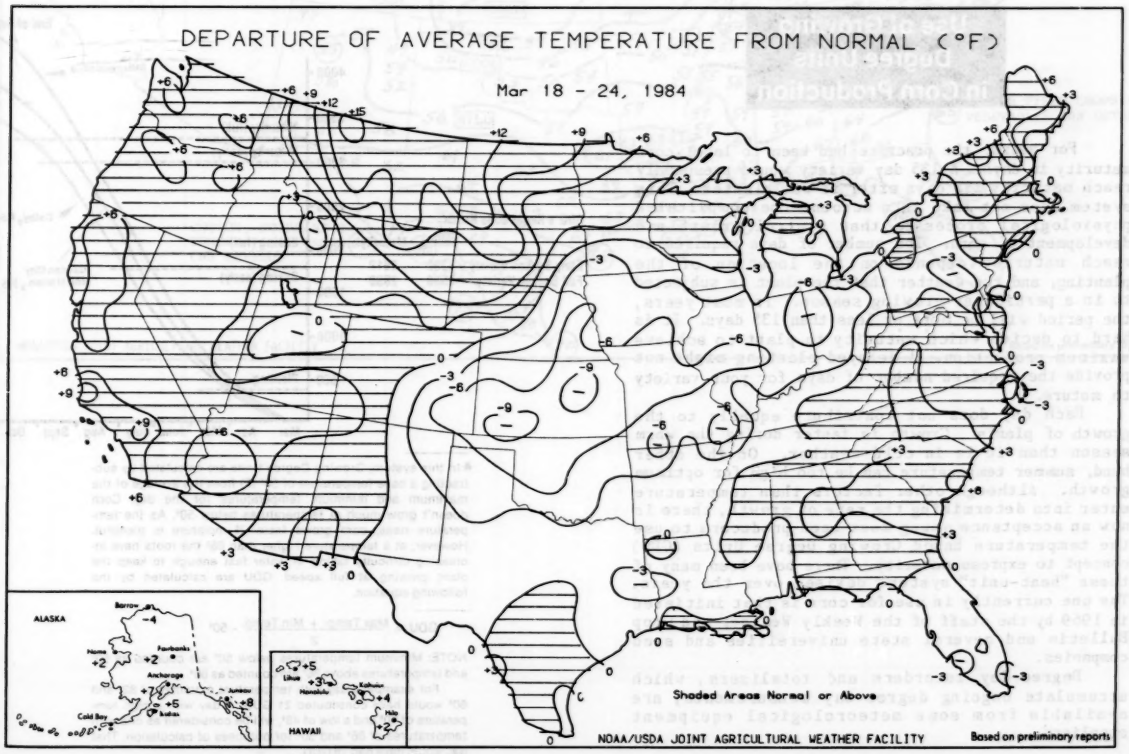
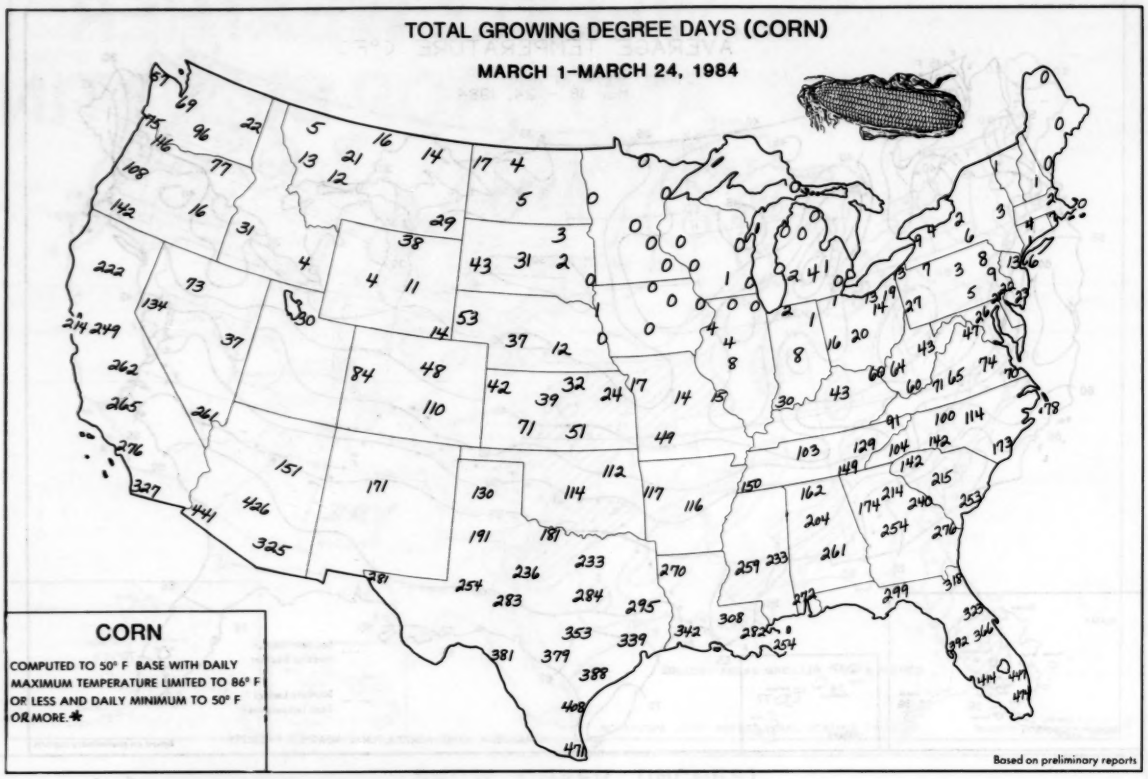

TOTAL PRECIPITATION, INCHES
Mar 18 - 24, 1984
DRY
DRY
ALASKA
HAWAII
SHADED AREAS GREATER THAN 2 INCHES
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


SNOW COVER (INCHES)
MARCH 18 - 24, 1984
ALASKA
Barrow
Nome
Fairbanks
Anchorage
Juneau
Cold Bay
Kodiak
LAST CHART THIS SEASON
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


AVERAGE TEMPERATURE (°F)
Mar 18 - 24, 1984
ALASKA
HAWAII
Southern Limit of Freezing Weather
Southern Limit of Zero Temperatures
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
Mar 18 - 24, 1984
ALASKA
HAWAII
Shaded Areas Normal or Above
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

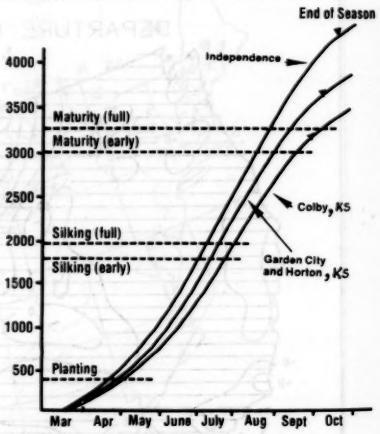

TOTAL GROWING DEGREE DAYS (CORN)
MARCH 1–MARCH 24, 1984
CORN
COMPUTED TO 50° F BASE WITH DAILY MAXIMUM TEMPERATURE LIMITED TO 86° F OR LESS AND DAILY MINIMUM TO 50° F OR MORE.*
Based on preliminary reports

Use of Growing Degree Units in Corn Production

For years, the practice had been to label corn maturity in days. A 135 day variety would presumedly reach maturity 135 days after it was planted. This system does not take into account the complicated physiological processes that control growth and development of corn. The number of days required to reach maturity depends on the location of the planting, and the weather that the plant is subjected to in a particular growing season. In most years, the period will be more or less than 135 days. It is hard to decide which maturity to plant to achieve maximum production. A delayed planting might not provide the required number of days for your variety to mature.

Each day does not contribute equally to the growth of plants. Growth is faster during the warm season than it is in cold weather. On the other hand, summer temperature can be too high for optimum growth. Although other factors than temperature enter into determining the rate of growth, there is now an acceptance among most seed producers to use the temperature based Growing Degree Units (GDU) concept to express maturity. There have been many of these "heat-unit" systems devised over the years. The one currently in use for corn is that initiated in 1969 by the staff of the Weekly Weather and Crop Bulletin and several state universities and seed companies.

Degree-day recorders and totalizers, which accumulate ongoing degree day measurements, are available from some meteorological equipment suppliers.



GDU's Required to Reach:

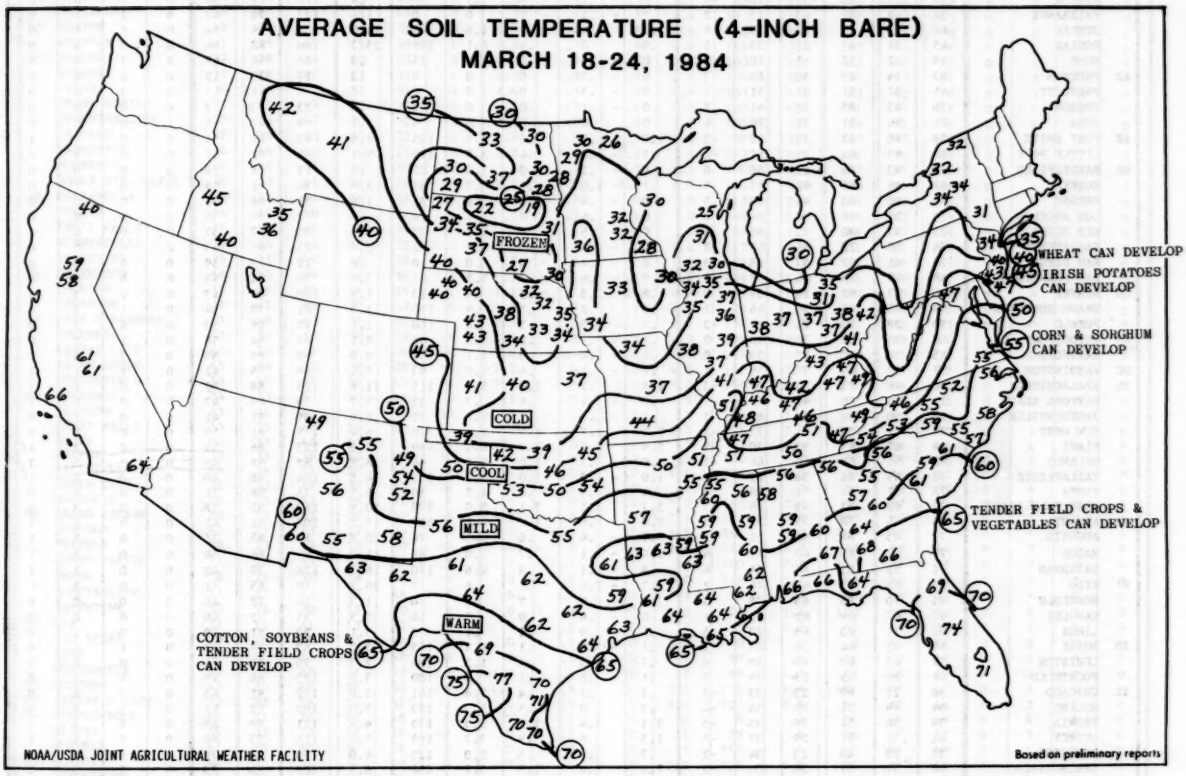
	Silking	Maturity
Early Season Variety	1390	2610
Full Season Variety	1560	2830

* In this system, Growing Degree Units are calculated by subtracting a base temperature of 50° (F) from the average of the maximum and minimum temperatures for the day. Corn doesn't grow much at temperatures below 50°. As the temperature rises, corn grows faster if moisture is plentiful. However, at a temperature higher than 86° the roots have increasing difficulty taking in water fast enough to keep the plant growing at full speed. GDU are calculated by the following equation.

$$GDU = \frac{\text{Max Temp.} + \text{Min Temp.}}{2} - 50^{\circ}$$

NOTE: Minimum temperatures below 50° are counted as 50° and temperatures above 86° are counted as 86°.

For example a day with temperature extremes of 82° and 60° would have contributed 21 GDU. A day with a high temperature of 90° and a low of 48°, will be considered as one with temperatures of 86° and 50° for purposes of calculation. That day would have had 18 GDU.


AVERAGE SOIL TEMPERATURE (4-INCH BARE)
MARCH 18-24, 1984
FROZEN
COLD
COOL
MILD
WARM
WHEAT CAN DEVELOP
IRISH POTATOES CAN DEVELOP
CORN & SORGHUM CAN DEVELOP
TENDER FIELD CROPS & VEGETABLES CAN DEVELOP
COTTON, SOYBEANS & TENDER FIELD CROPS CAN DEVELOP
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

Weather Data for the Week Ending MARCH 24, 1984

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE MAR. 4	PCT. NORMAL SINCE MAR. 4	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	71	44	81	34	58	2	1.1	- .5	.5	2.7	57	9.9	64	84	37	0	0	3	1
MOBILE	73	49	79	37	61	0	2.3	.8	1.3	4.7	107	15.7	106	91	49	0	0	3	2
MONTGOMERY	77	46	83	37	61	3	2.8	1.4	1.4	3.6	84	12.9	94	88	41	0	0	2	2
AK ANCHORAGE	42	22	44	19	32	7	0	- .1	0	.1	25	2.4	120	63	36	0	7	0	0
BARROW	-14	-23	-8	-30	-18	-4	0	- .1	0	.1	50	.4	100	78	66	0	7	0	0
FAIRBANKS	24	2	32	-3	13	2	T	- .1	T	0	0	1.6	123	70	47	0	7	1	0
JUNEAU	44	35	47	29	39	8	1.1	.4	.5	1.6	70	14.0	136	96	74	0	2	5	0
KODIAK	45	34	49	26	39	5	.9	0	.4	8.1	289	25.3	140	88	64	0	3	4	0
NOME	18	2	27	-5	10	2	0	- .1	0	.1	25	.9	50	56	42	0	7	0	0
AZ PHOENIX	83	54	89	50	69	7	0	- .2	0	0	0	.3	17	33	12	0	0	0	0
PRESCOTT	65	37	71	31	51	7	0	- .3	0	0	0	0	0	41	13	0	3	0	0
TUCSON	76	45	85	38	61	2	0	- .1	0	0	0	.6	33	33	7	0	0	0	0
YUMA	84	56	91	52	70	4	0	0	0	0	0	.1	9	41	15	1	0	0	0
AR FORT SMITH	58	40	67	33	49	-3	1.0	.1	.6	3.5	135	6.9	93	86	54	0	0	3	1
LITTLE ROCK	60	43	64	35	52	-2	.5	- .6	.4	3.8	115	9.1	81	82	52	0	0	3	0
CA BAKERSFIELD	74	43	86	39	58	0	0	- .2	0	.3	50	.5	17	88	28	0	0	0	0
EUREKA	61	46	66	42	53	5	.1	- 1.0	.1	3.3	92	8.0	54	91	68	0	0	2	0
FRESNO	74	46	83	41	60	5	0	- .4	0	.4	36	1.6	31	86	36	0	0	0	0
LOS ANGELES	73	55	78	53	64	6	0	- .4	0	.1	8	.5	7	79	39	0	0	0	0
RED BLUFF	73	47	80	42	60	6	0	- .5	0	1.2	75	3.5	35	77	37	0	0	0	0
SACRAMENTO	74	50	78	46	62	8	0	- .4	0	.8	62	2.0	23	85	43	0	0	0	0
SAN DIEGO	75	61	82	57	68	9	0	- .4	0	0	0	.6	12	73	39	0	0	0	0
SAN FRANCISCO	68	48	75	45	58	5	T	- .6	T	1.2	67	3.1	30	84	53	0	0	0	0
CO DENVER	50	27	62	26	39	0	.8	.5	.5	.9	113	1.9	100	84	47	0	7	3	1
GRAND JUNCTION	58	35	67	30	46	2	.5	.2	.2	.9	150	1.3	81	70	34	0	1	3	0
PUEBLO	50	28	59	21	39	-3	.7	.5	.3	.8	160	1.1	92	89	53	0	6	3	0
CT BRIDGEPORT	46	35	51	30	40	0	.2	- .7	.2	2.3	88	8.1	88	84	58	0	1	2	0
HARTFORD	45	34	50	27	39	0	.6	- .4	.3	3.1	107	9.8	95	89	59	0	3	3	0
DC WASHINGTON	59	40	64	32	50	1	.6	- .2	.6	2.0	83	7.1	89	75	42	0	1	1	1
FL APALACHICOLA	70	48	73	37	59	-3	1.6	.7	1.6	3.1	115	11.8	115	88	52	0	0	1	1
DAYTONA BEACH	75	54	79	43	64	-1	.6	- .1	.6	.7	33	5.7	70	89	47	0	0	1	1
JACKSONVILLE	78	50	84	43	64	2	.1	- .7	.1	1.8	72	8.6	89	91	41	0	0	1	0
KEY WEST	79	67	81	61	73	-2	2.0	1.7	1.0	2.1	210	6.4	175	81	59	0	0	2	1
MIAMI	79	62	83	53	70	-2	2.9	2.5	2.9	6.1	469	7.0	123	86	51	0	0	2	1
ORLANDO	78	55	84	46	66	-1	1.0	.3	1.0	1.4	64	6.2	82	98	48	0	0	2	1
TALLAHASSEE	79	45	86	36	62	1	1.0	- .3	1.0	4.7	121	14.8	104	98	40	0	0	1	1
TAMPA	78	57	84	51	68	0	.4	- .3	.4	1.2	50	6.1	76	96	51	0	0	1	0
WEST PALM BEACH	77	62	82	49	69	-2	3.7	3.1	3.1	5.0	278	10.9	142	91	58	0	0	3	2
GA ATLANTA	70	45	78	35	57	3	2.0	.6	1.7	4.4	107	15.2	108	81	42	0	0	2	1
AUGUSTA	77	45	84	40	61	5	.7	- .4	.6	2.5	74	10.8	89	85	35	0	0	2	1
MACON	77	47	83	40	62	4	1.0	- .1	.7	3.0	86	11.7	89	86	38	0	0	3	1
SAVANNAH	76	52	85	44	64	4	.8	- .1	.8	4.6	170	16.7	176	79	42	0	0	1	1
HI HILO	82	65	83	63	74	2	.3	- 2.6	.2	.6	7	20.2	59	85	51	0	0	3	0
HONOLULU	85	70	86	65	78	3	T	- .8	T	0	0	1.3	14	78	46	0	0	0	0
KAHULUI	87	67	89	62	77	4	0	- .6	0	.3	14	3.5	35	72	46	0	0	0	0
LIHUE	82	71	83	65	77	5	.1	- .9	.1	.1	3	3.1	23	81	59	0	0	1	0
ID BOISE	55	35	64	26	45	2	.1	- .2	.1	1.3	163	3.0	83	79	43	0	1	1	0
LEWISTON	57	43	63	40	50	6	.7	.5	.5	1.3	186	2.3	79	90	54	0	0	4	0
POCATELLO	48	29	55	23	39	2	.1	- .1	.1	.6	100	3.2	123	84	49	0	5	2	0
IL CHICAGO	38	27	49	25	33	-5	.7	.1	.4	2.4	141	5.0	102	91	65	0	7	4	0
MOLINE	39	29	51	26	34	-4	.7	0	.5	3.3	183	5.0	100	82	61	0	7	2	0
PEORIA	39	30	51	26	35	-5	2.1	1.4	1.8	3.5	175	6.4	121	89	69	0	6	3	1
QUINCY	41	32	51	29	37	-5	1.3	.6	.9	3.7	185	5.9	116	83	66	0	5	5	1
ROCKFORD	39	29	48	23	34	-2	.7	.1	.5	2.0	125	4.0	89	94	71	0	6	3	1
SPRINGFIELD	40	31	51	28	36	-7	2.0	1.2	1.3	3.7	168	6.3	109	94	73	0	6	3	2
IN EVANSVILLE	51	36	64	30	44	-3	2.6	1.5	1.1	6.0	188	9.4	98	85	59	0	2	5	2
FORT WAYNE	36	20	42	24	32	-7	.9	.2	.6	2.9	145	5.6	89	94	76	0	6	5	1
INDIANAPOLIS	43	32	50	30	37	-5	1.1	.2	.4	2.8	108	7.0	88	87	65	0	4	5	0
SOUTH BEND	38	20	44	23	34	-4	.7	- .1	.3	2.0	95	4.4	64	83	61	0	5	4	0
IA DES MOINES	38	28	47	24	33	-5	.5	0	.3	1.4	100	3.3	87	83	62	0	7	2	0
SIOUX CITY	37	25	51	17	31	-5	.1	- .4	.1	1.1	92	2.6	93	98	76	0	7	1	0
WATERLOO	36	24	43	12	30	-4	.6	.1	.4	1.3	87	2.7	75	94	74	0	6	2	0
KS CONCORDIA	41	29	50	20	35	-7	1.5	1.1	1.1	2.2	183	3.6	129	85	62	0	6	4	1
DODGE CITY	43	27	54	20	35	-9	1.4	1.1	.8	2.1	233	3.1	129	90	60	0	7	3	2
GOODLAND	41	27	55	23	34	-5	1.3	1.0	.9	1.3	163	3.6	212	94	67	0	7	4	1
TOPEKA	42	31	47	23	37	-7	2.1	1.6	1.3	3.7	264	5.4	154	89	73	0	5	5	1
WICHITA	45	31	55	20	38	-8	4.2	3.7	2.1	5.9	454	7.9	263	89	64	0	2	4	3
KY BOWLING GREEN	58	39	75	31	48	0	1.6	.3	.9	4.1	108	10.1	78	96	57	0	2	4	1
LEXINGTON	53	35	67	32	44	-2	1.4	.3	1.1	2.8	82	7.8	71	87	60	0	1	5	1
LOUISVILLE	53	36	65	32	44	-3	1.4	.3	.8	3.2	97	5.7	55	81	55	0	1	5	1
LA ALEXANDRIA	69	47	75	41	58	-3	.6	- .5	.4	3.2	91	17.8	124	77	39	0	0	2	0
BATON ROUGE	73	52	78	43	63	0	.9	- .2	.9	1.2	39	10.4	79	85	38	0	0	1	1
LAKE CHARLES	74	53	78	44	63	1	.9	.3	.7	1.9	95	11.9	117	86	43	0	0	3	1
NEW ORLEANS	73	52	78	45	63	0	2.3	1.3	2.3	4.7	147	14.1	100	95	50	0	0	2	1

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

+100 = NORMAL & ACTUAL NEAR THE SAME

Weather Data for the Week Ending MARCH 24, 1984

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE MAR. 4	PCT. NORMAL SINCE MAR. 4	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	SHREVEPORT	71	48	81	39	60	1	.2	- .7	.2	3.4	136	11.1	106	80	40	0	0	2	0
ME	CARIBOU	38	26	45	11	32	5	.4	- .2	.2	2.4	150	7.8	120	88	63	0	5	5	0
	PORTLAND	42	32	46	26	37	2	1.4	.5	.6	4.4	169	12.1	116	84	64	0	4	5	1
MD	BALTIMORE	54	34	60	25	44	-1	.5	- .3	.5	2.2	88	8.0	88	84	48	0	2	1	1
	SALISBURY	60	38	69	28	49	3	.3	- .6	.3	4.4	157	10.9	108	90	43	0	2	1	0
MA	BOSTON	42	33	54	21	38	-3	1.4	.4	.8	4.4	152	14.7	131	91	70	0	4	4	1
	CHATHAM	43	35	49	29	39	1	1.6	.7	.9	4.6	164	12.4	103	--	--	0	1	6	1
MI	ALPENA	37	28	44	20	33	3	1.2	.7	.7	2.3	153	4.0	82	94	73	0	3	4	1
	DETROIT	39	28	46	23	33	-4	1.9	1.3	.9	3.2	178	5.4	95	83	61	0	7	5	2
	FLINT	36	25	43	17	31	-3	1.4	.9	.8	2.9	207	4.0	83	92	70	0	7	3	1
	GRAND RAPIDS	37	27	43	16	32	-4	.9	.3	.4	2.8	165	4.8	91	87	66	0	5	5	0
	HOUGHTON LAKE	37	26	47	20	32	2	1.1	.6	.5	1.7	131	3.7	86	91	74	0	6	3	0
	LANSING	37	26	43	13	32	-4	1.0	.5	.5	2.4	160	3.7	73	93	73	0	6	4	0
	MARQUETTE	34	16	45	0	25	0	3.2	2.5	2.1	3.9	217	8.9	146	95	69	0	7	3	2
	MUSKEGON	36	24	44	14	30	-5	.8	.1	.3	1.7	100	4.3	70	87	64	0	6	4	0
	SAULT STE. MARIE	36	23	41	16	30	3	1.5	1.0	1.0	2.0	154	5.6	100	91	66	0	6	3	1
MN	ALEXANDRIA	40	24	48	18	32	5	0	- .3	0	.9	113	2.5	104	93	62	0	7	0	0
	DULUTH	34	19	40	10	27	1	.1	- .3	.1	.6	46	2.0	56	93	59	0	7	1	0
	INT'L FALLS	37	22	42	15	30	6	T	- .3	T	.2	25	1.2	48	97	49	0	6	0	0
	MINNEAPOLIS	39	24	48	16	32	0	.1	- .3	.1	1.4	117	3.8	131	81	48	0	7	1	0
	ROCHESTER	35	23	45	16	29	-1	.3	- .1	.2	1.0	91	3.2	114	88	65	0	7	2	0
MS	GREENWOOD	68	50	79	42	59	2	.1	- 1.4	.1	4.7	109	12.6	86	77	40	0	0	2	0
	JACKSON	72	46	83	36	59	1	1.1	- .2	.8	4.3	108	11.9	83	93	44	0	0	2	1
	MERIDIAN	72	42	80	32	57	0	1.8	.3	.8	3.9	85	11.6	77	100	48	0	2	3	2
MO	CAPE GIRARDEAU	53	40	63	35	46	--	2.3	1.1	1.2	4.7	138	9.9	101	92	57	0	0	4	3
	COLUMBIA	43	33	55	30	38	-6	2.1	1.3	.9	4.3	205	8.0	129	89	67	0	6	5	2
	KANSAS CITY	40	31	49	24	36	-8	2.0	1.4	.8	4.1	256	6.2	159	92	77	0	4	5	2
	SAINT LOUIS	45	34	53	30	39	-6	2.2	1.4	.9	4.4	191	8.9	131	96	72	0	1	3	2
	SPRINGFIELD	50	36	58	30	43	-4	2.1	1.2	1.5	3.8	158	8.7	134	84	56	0	2	4	1
MT	BILLINGS	54	33	62	30	44	9	.1	- .2	T	.5	63	2.2	92	74	32	0	2	4	0
	GLASGOW	53	31	61	26	42	13	.2	.1	.1	.5	167	1.1	100	85	40	0	6	3	0
	GREAT FALLS	55	35	60	29	45	13	.3	.1	.3	1.2	171	2.7	100	75	39	0	1	1	0
	HAVRE	52	32	62	23	42	12	.1	0	.1	.2	67	.9	75	94	43	0	4	2	0
	HELENA	52	35	56	27	43	10	.1	0	.1	.4	100	.8	50	79	38	0	1	1	0
	KALISPELL	46	34	51	29	40	7	.4	.2	.3	1.0	200	2.5	74	81	53	0	1	3	0
	MILES CITY	56	33	66	30	45	11	T	- .1	T	.2	50	.3	23	83	35	0	4	1	0
	MISSOULA	49	35	57	26	42	6	.2	0	.1	1.0	167	2.2	76	87	51	0	2	5	0
NE	GRAND ISLAND	40	25	52	20	32	-6	1.2	.8	.9	2.1	191	4.5	180	84	60	0	7	2	1
	LINCOLN	42	27	53	19	34	-4	.7	.2	.5	1.9	146	3.7	119	92	65	0	6	2	1
	NORFOLK	38	23	49	18	30	-6	.4	0	.3	1.6	145	4.8	185	88	64	0	7	2	0
	NORTH PLATTE	51	24	65	22	37	1	.2	- .1	.1	.7	100	2.1	117	81	35	0	7	2	0
	OMAHA	38	26	50	18	32	-6	.3	- .2	.3	1.9	146	3.1	94	94	74	0	7	2	0
	SCOTTSBLUFF	55	33	63	28	44	7	.6	.3	.4	.7	88	1.6	94	77	36	0	2	2	0
	VALENTINE	53	26	70	19	40	6	0	- .2	0	.6	100	1.4	100	82	33	0	6	0	0
NV	ELY	52	21	61	15	37	2	T	- .2	T	.3	50	1.1	50	82	36	0	7	0	0
	LAS VEGAS	73	46	82	43	60	3	0	- .1	0	0	0	0	0	34	11	0	0	0	0
	RENO	62	29	71	24	46	5	0	- .1	0	.2	50	.8	29	72	24	0	5	0	0
	WINNEMUCCA	58	27	68	21	42	3	T	- .1	T	.2	67	1.2	55	69	26	0	6	0	0
NH	CONCORD	43	33	48	26	38	4	1.2	.5	.6	2.5	132	9.8	131	89	61	0	3	5	1
NJ	ATLANTIC CITY	52	33	56	24	42	-1	.1	- .9	.1	3.5	125	9.5	94	87	44	0	3	2	0
NM	ALBUQUERQUE	64	31	74	20	48	0	T	- .1	T	0	0	.3	25	64	16	0	4	2	0
	CLOVIS	59	33	73	26	46	-2	T	- .1	T	.1	25	.5	36	70	32	0	3	0	0
	ROSWELL	67	38	80	30	52	-2	T	0	T	.5	250	.5	56	56	18	0	1	0	0
NY	ALBANY	44	33	51	24	39	3	.7	- .1	.3	2.5	119	6.2	86	81	55	0	4	4	0
	BINGHAMTON	41	26	57	21	34	0	.3	- .5	.2	1.2	55	6.2	82	91	60	0	7	3	0
	BUFFALO	42	29	54	23	36	0	.3	- .4	.1	1.1	55	6.3	82	90	62	0	4	4	0
	NEW YORK	49	35	56	31	42	-1	T	- 1.0	T	3.0	103	8.8	92	87	56	0	2	1	0
	ROCHESTER	40	28	52	23	34	-2	.3	- .3	.1	1.4	82	6.5	98	89	67	0	5	4	0
	SYRACUSE	41	27	49	19	34	-2	.2	- .5	.1	.9	43	5.6	73	91	64	0	6	4	0
NC	ASHEVILLE	63	38	77	29	50	2	1.9	.7	1.6	3.2	89	12.0	105	96	53	0	1	4	1
	CHARLOTTE	67	45	74	37	56	4	.8	- .3	.7	3.5	103	13.4	117	76	37	0	0	3	1
	GREENSBORO	63	41	69	29	52	2	1.2	.4	.5	3.4	126	12.2	120	80	44	0	1	3	1
	HATTERAS	57	42	64	37	50	-3	.6	- .3	.3	1.9	68	7.7	61	86	56	0	0	3	0
	NEW BERN	69	45	71	39	57	2	1.5	.7	.9	4.2	168	12.7	113	88	43	0	0	2	2
	RALEIGH	64	40	69	30	52	1	1.1	.3	.6	3.4	131	13.9	138	84	44	0	1	3	1
	WILMINGTON	70	48	75	42	59	3	.7	- .2	.7	2.6	90	10.1	95	90	49	0	0	1	1
ND	BISMARCK	43	27	56	23	35	6	T	- .2	T	.8	160	1.5	115	87	60	0	7	0	0
	FARGO	37	27	50	20	32	5	T	- .2	T	.6	120	2.5	156	87	69	0	7	1	0
	GRAND FORKS	39	27	47	18	33	8	T	- .2	T	.2	40	1.3	76	92	71	0	7	0	0
	WILLISTON	52	27	66	23	40	12	.1	- .1	.1	.4	100	1.3	87	87	46	0	7	1	0
OH	AKRON-CANTON	44	28	70	22	36	-3	1.1	.3	.6	2.1	91	6.1	82	84	65	0	6	4	1
	CINCINNATI	46	32	57	30	39	-5	1.1	.1	.8	2.8	100	6.0	65	86	64	0	6	4	1
	CLEVELAND	46	28	68	22	37	-2	1.8	1.1	.8	2.9	153	7.7	107	92	62	0	6	5	2
	COLUMBUS	45	32	63	25	38	-4	2.0	1.3	1.6	2.9	132	5.9	79	80	56	0	4	3	1

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending MARCH 24, 1984

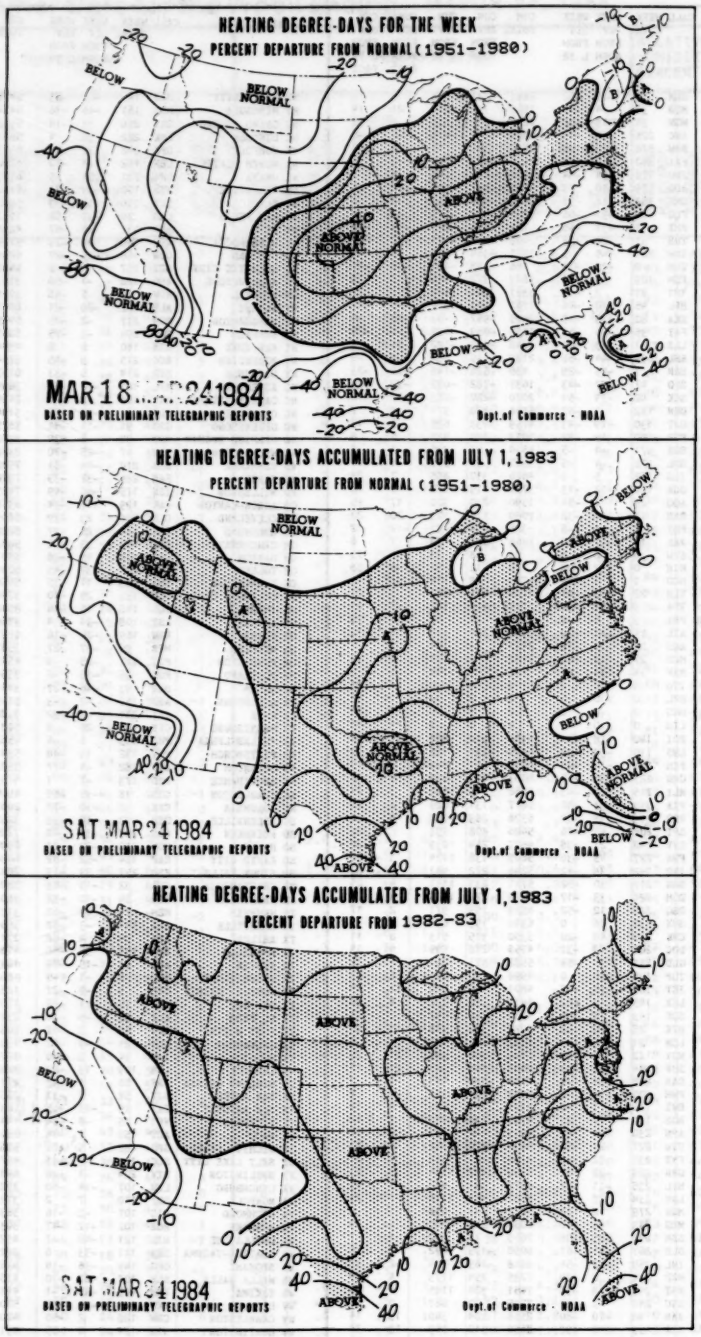
STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE MAR. 4	PCT. NORMAL SINCE MAR. 4	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	DAYTON	41	29	56	26	35	-7	1.1	.3	.7	2.5	119	6.4	89	81	61	0	7	4	1
	TOLEDO	38	26	49	19	32	-6	1.1	.5	.7	2.7	159	4.9	83	93	72	0	7	4	1
	YOUNGSTOWN	45	27	72	17	36	-2	.8	.1	.4	1.4	64	5.0	66	79	54	0	5	4	0
OK	OKLAHOMA CITY	56	36	70	30	46	-5	2.8	2.4	2.4	3.9	300	5.5	141	83	54	0	2	4	1
	TULSA	56	40	62	30	48	-3	3.5	2.8	1.8	4.8	240	8.1	153	85	54	0	1	3	2
OR	ASTORIA	54	45	60	38	49	5	1.5	- .1	.5	4.2	86	19.5	77	95	73	0	0	7	1
	BURNS	50	31	57	27	41	3	.2	0	.1	1.2	400	2.2	200	83	53	0	4	3	0
	MEDFORD	61	41	69	34	51	5	T	- .4	T	.9	69	3.6	51	90	52	0	0	1	0
	PENDLETON	55	41	59	38	48	3	.4	.2	.3	1.2	171	3.6	95	84	56	0	0	3	0
	PORTLAND	57	45	61	43	51	5	.9	.1	.3	2.4	96	8.4	64	90	63	0	0	5	0
	SALEM	59	45	62	37	52	7	1.0	.1	.3	3.2	110	10.9	72	96	65	0	0	5	0
PA	ALLENTOWN	50	32	61	25	41	0	.3	- .6	.3	1.9	73	7.1	75	77	45	0	3	3	0
	ERIE	43	28	58	20	36	0	.4	- .3	.1	1.1	52	5.1	71	83	60	0	4	4	0
	HARRISBURG	47	31	55	26	39	-4	.5	- .3	.4	1.9	79	7.4	86	84	46	0	4	3	0
	PHILADELPHIA	53	33	60	25	43	-1	.2	- .7	.2	3.7	137	8.6	93	82	43	0	2	2	0
	PITTSBURGH	48	29	76	22	39	-2	.5	- .4	.3	1.2	48	4.7	57	82	53	0	6	4	0
	SCRANTON	47	31	62	25	39	0	.3	- .3	.2	1.1	61	5.3	80	79	58	0	3	5	0
RI	PROVIDENCE	45	35	55	31	40	1	1.1	.1	.6	4.1	137	13.4	117	82	57	0	3	3	1
SC	CHARLESTON	75	53	84	44	64	5	.4	- .6	.4	3.5	113	12.1	117	89	44	0	0	1	0
	COLUMBIA	75	45	85	39	60	3	.7	- .4	.7	2.6	74	11.6	91	85	35	0	0	2	1
	FLORENCE	74	48	82	43	61	4	.5	- .4	.5	2.4	83	9.7	94	87	33	0	0	1	1
	GREENVILLE	66	42	79	34	54	2	1.1	- .3	.8	3.4	81	13.6	99	81	40	0	0	3	1
SD	ABERDEEN	42	29	55	26	35	5	0	- .3	0	.8	114	2.2	116	93	72	0	6	0	0
	HURON	42	28	53	24	35	3	0	- .3	0	.5	63	2.1	100	94	70	0	6	0	0
	RAPID CITY	54	29	70	22	42	7	.1	- .2	.1	.5	71	.8	44	80	37	0	7	1	0
	SIOUX FALLS	35	21	43	15	28	-5	T	- .4	T	.8	80	2.6	108	95	77	0	7	1	0
TN	CHATTANOOGA	66	40	77	28	53	1	1.3	- .1	1.1	2.6	59	10.3	68	88	45	0	1	3	1
	KNOXVILLE	65	40	80	31	53	1	1.6	.4	1.3	2.5	66	9.3	69	91	52	0	1	4	1
	MEMPHIS	64	44	73	39	54	0	.9	- .4	.5	4.9	132	11.3	84	80	47	0	0	2	1
	NASHVILLE	62	39	76	30	50	-1	1.3	.1	.7	3.3	87	7.5	57	87	49	0	1	4	1
TX	ABILENE	71	41	83	33	56	-1	.1	- .2	.1	.5	71	2.0	71	73	28	0	0	1	0
	AMARILLO	57	28	69	23	43	-5	.2	0	.1	.2	33	1.2	75	81	42	0	6	3	0
	AUSTIN	76	51	83	44	64	2	.7	.4	.4	2.4	267	5.1	96	70	32	0	0	3	0
	BEAUMONT	71	54	74	43	63	0	1.5	.9	.8	1.9	100	12.6	125	89	48	0	0	3	2
	BROWNSVILLE	80	58	90	48	69	-1	.1	0	.1	.1	33	5.4	169	94	42	1	0	1	0
	CORPUS CHRISTI	77	56	81	44	67	-1	.1	- .1	.1	.2	40	6.6	165	83	41	0	0	2	0
	DEL RIO	77	53	83	44	65	0	0	- .1	0	0	0	1.6	94	56	21	0	0	0	0
	EL PASO	73	40	81	32	57	0	0	- .1	0	.4	133	.7	64	40	12	0	1	0	0
	FORT WORTH	68	44	79	36	56	-2	3.2	2.6	1.7	4.8	300	8.9	168	82	43	0	0	2	2
	GALVESTON	69	55	73	45	62	-1	.6	.1	.5	1.4	93	5.6	80	94	60	0	0	2	1
	HOUSTON	72	50	77	40	61	-2	1.6	1.1	1.4	2.4	141	10.6	123	83	44	0	0	2	1
	LUBBOCK	66	33	80	29	49	-3	T	- .2	T	.1	17	.3	20	67	26	0	4	0	0
	MIDLAND	71	40	82	31	56	-1	0	- .1	0	0	0	.6	43	55	17	0	1	0	0
	SAN ANGELO	74	40	84	33	57	-2	.3	.1	.3	.5	100	3.5	175	74	24	0	0	1	0
	SAN ANTONIO	79	51	89	40	65	1	.6	.3	.6	1.9	211	4.2	95	73	32	0	0	2	1
	VICTORIA	76	55	80	43	65	0	.6	.3	.6	1.8	200	6.3	115	92	43	0	0	2	1
	WACO	71	46	80	35	58	-2	.6	.2	.4	3.5	269	5.3	98	91	45	0	0	2	0
	WICHITA FALLS	67	39	78	32	53	-2	.6	.2	.6	1.1	85	2.1	58	81	42	0	1	2	1
UT	BLANDING	50	31	64	25	41	1	T	- .1	T	.2	33	.9	28	65	30	0	4	0	0
	CEDAR CITY	57	28	65	23	42	2	.1	- .2	.1	.2	29	1.7	68	76	28	0	5	2	0
	SALT LAKE CITY	52	34	57	31	43	1	.2	- .2	.1	1.5	136	2.9	74	84	46	0	2	3	0
VT	BURLINGTON	38	27	47	14	33	1	.6	.1	.2	1.5	100	5.3	98	88	59	0	5	4	0
VA	NORFOLK	58	40	66	35	49	-1	.2	- .6	.2	2.4	92	10.0	98	78	43	0	0	1	0
	RICHMOND	61	38	66	30	50	0	.5	- .2	.5	3.5	140	11.6	123	85	40	0	1	1	1
	ROANOKE	60	40	66	28	50	2	1.3	.5	.9	2.7	104	9.0	98	82	44	0	1	3	1
WA	COLVILLE	50	38	53	33	44	6	1.4	1.1	.9	2.2	244	5.2	111	94	71	0	0	4	1
	QUILLAYUTE	53	42	57	36	48	5	3.9	1.5	1.3	6.6	85	39.6	108	99	81	0	0	7	3
	SEATTLE-TACOMA	54	44	60	42	49	5	1.3	.6	.8	3.0	125	10.5	81	91	62	0	0	6	1
	SPOKANE	50	37	54	32	43	5	.3	.1	.2	1.0	125	3.5	70	91	65	0	1	5	0
	YAKIMA	57	38	60	30	48	5	.5	.4	.5	.9	225	1.9	70	81	46	0	1	3	0
WV	BECKLEY	57	35	69	26	46	3	.3	- .6	.3	.7	25	6.3	62	82	54	0	4	4	0
	CHARLESTON	58	35	73	26	47	0	.6	- .4	.4	1.5	52	5.7	56	76	42	0	3	5	0
	HUNTINGTON	57	37	72	30	47	0	1.0	0	.7	1.6	55	5.4	58	78	50	0	1	3	1
	PARKERSBURG	55	37	75	28	46	1	1.0	.1	.4	1.5	54	4.2	40	93	59	0	2	3	0
WI	GREEN BAY	35	24	44	17	29	-2	1.0	.6	.4	1.8	138	3.9	108	92	67	0	7	4	0
	LA CROSSE	42	26	50	18	34	0	.4	- .2	.3	1.9	136	2.9	85	92	54	0	6	3	0
	MADISON	39	27	49	20	33	-1	.4	- .1	.3	1.1	79	2.7	73	90	62	0	7	4	0
	MILWAUKEE	39	29	44	24	34	0	.9	.2	.5	2.2	122	4.3	84	84	61	0	5	5	0
	WAUSAU	39	27	50	19	33	3	.3	- .2	.2	1.2	92	3.1	97	90	58	0	6	4	0
WY	CASPER	49	29	60	24	39	6	.8	.6	.5	1.0	167	2.8	156	90	49	0	6	2	1
	CHEYENNE	46	26	57	24	36	3	.5	.2	.3	.7	78	2.1	100	82	48	0	7	2	0
	LANDER	46	27	52	21	37	3	T	- .3	T	.2	29	2.5	139	73	42	0	7	0	0
	SHERIDAN	57	33	65	29	45	12	.4	.2	.2	1.0	167	2.1	95	81	38	0	3	3	0
PR	SAN JUAN	88	71	91	68	79	1	.3	- .3	.2	.8	50	6.0	86	79	51	3	0	2	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

HEATING DEGREE DAY DATA WEEKLY SUMMARY
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 3-24-1984
ACCUMULATIONS ARE FROM JULY 1
** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

STATE CITY	CALL	WEEK TOTAL	WEEK DEV FROM NORM	WEEK DEV FROM L YR	CUM TOTAL	CUM DEV FROM NORM	CUM DEV FROM L YR	CUM DEV FROM NORM PRCT	CUM DEV FROM L YR PRCT
AL BIRMINGHAM	BHM	55	-19	-82	2897	231	363	9	14
AL MOBILE	MOB	31	-4	-74	1965	335	244	21	14
AL MONTGOMERY	MGM	34	-19	-82	2233	72	333	3	18
AK ANCHORAGE	ANC	228	-50	-13	8062	-745	-475	-8	-6
AK BARROW	BRW	578	23	86	15832	306	18	2	0
AK FAIRBANKS	FAI	360	-13	73	11597	-622	299	-5	3
AK JUNEAU	JNU	178	-54	-54	6626	-570	145	-8	2
AK KODIAK	ADQ	179	-40	19	5885	-827	-69	-12	-1
AK NOME	OME	382	-18	98	10605	-526	630	-5	6
AZ FLAGSTAFF	FLG	176	-31	-66	5204	-518	-578	-9	-10
AZ PHOENIX	PHX	1	-37	-46	769	-593	-223	-44	-22
AZ TUCSON	TUS	31	-20	-53	1408	-197	-171	-12	-11
AZ WINSLOW	INW	127	-5	5	3871	-364	192	-9	5
AZ YUMA	YUM	0	-19	-14	486	-448	-181	-48	-27
AR FORT SMITH	FSM	109	14	-30	3603	372	546	12	18
AR LITTLE ROCK	1N1	91	7	-53	3351	398	492	13	17
CA BAKERSFIELD	BFL	45	-10	-46	1761	-148	-366	-8	-17
CA EUREKA	EKA	80	-39	-15	2495	-957	-93	-28	-4
CA FRESNO	FAT	35	-36	-58	1788	-559	-434	-24	-20
CA LOS ANGELES	LAX	11	-43	-61	840	-383	-122	-31	-13
CA RED BLUFF	RBL	34	-44	-56	2130	-199	-82	-9	-4
CA SAN DIEGO	SAN	1	-41	-29	486	-526	-145	-52	-23
CA SAN FRANCISCO	SFO	47	-37	-43	1637	-782	-655	-32	-29
CA STOCKTON	SCK	40	-34	-51	2070	-280	-283	-12	-12
CO DENVER	DEN	182	1	-87	5446	430	371	9	7
CO GRAND JUNCTION	GJT	130	-19	-43	4759	-238	535	-5	13
CO PUEBLO	PUB	180	19	-42	5013	280	428	6	9
CT BRIDGEPORT	BDR	171	-4	-5	4694	61	396	1	9
CT HARTFORD	BDL	178	-4	-5	5387	56	545	1	11
DE WILMINGTON	ILG	152	5	9	4676	317	885	7	23
DC WASHINGTON	DCA	107	-12	-13	3728	19	570	1	18
FL APALACHICOLA	AQQ	29	0	-54	1590	230	320	17	25
FL DAYTONA BEACH	DAB	13	-6	-38	1050	176	173	20	20
FL FORT MEYER	FMY	7	3	-8	385	-54	41	-12	12
FL JACKSONVILLE	JAX	14	-17	-60	1468	101	89	7	6
FL KEY WEST	EYW	0	0	0	78	-38	33	-33	73
FL MIAMI	MIA	0	-2	-8	186	-12	51	-6	38
FL ORLANDO	MCO	9	0	-24	731	79	119	12	19
FL TALLAHASSEE	TLH	22	-13	-61	1702	122	300	8	21
FL TAMPA	TPA	3	-11	-32	717	-15	122	-2	21
FL WEST PALM BEACH	PBI	5	5	-9	291	28	59	11	25
GA ATLANTA	ATL	54	-27	-79	2949	160	314	6	12
GA AUGUSTA	AGS	28	-39	-78	2417	0	164	0	7
GA MACON	MCN	27	-28	-66	2182	8	274	0	14
GA SAVANNAH	SAV	14	-34	-65	1798	-52	155	-3	9
HI HILO-HAWAII	ITO	0	0	0	0	0	0	**	**
HI HONOLULU-OAHU	HNL	0	0	0	0	0	0	**	**
HI KAHULUI-MAUI	OGG	0	0	0	0	0	0	**	**
HI LIHUE-KAUAI	LIH	0	0	0	0	0	0	**	**
ID BOISE	BOI	140	-18	-21	5360	512	808	11	18
ID LEWISTON	LWS	110	-39	-32	4429	-139	365	-3	9
ID POCATELLO	PIH	183	-14	-23	6818	581	849	9	15
IL CHICAGO	ORD	223	36	-47	6063	499	1005	9	20
IL MOLINE	MLI	215	28	-43	5866	145	1001	3	21
IL PEORIA	PIA	210	33	-40	5617	131	1029	2	22
IL ROCKFORD	RFD	219	18	-54	6326	283	1080	5	21
IL SPRINGFIELD	SPI	205	45	-46	5426	408	993	8	22
IN EVANSVILLE	EVV	148	21	-38	4507	244	1039	6	30
IN FORT WAYNE	FWA	227	45	-36	5605	138	1124	3	25
IN INDIANAPOLIS	IND	192	34	-42	5246	272	981	6	23
IN SOUTH BEND	SBN	217	30	-52	5711	233	1131	4	25
IA DES MOINES	DSM	224	33	-17	6028	226	1070	4	22
IA DUBUQUE	DBQ	225	12	-52	6559	153	971	2	17
IA SIOUX CITY	SUX	237	36	0	6345	193	671	3	12
KS CONCORDIA	CNK	210	49	-20	5350	375	513	8	11
KS DODGE CITY	DDC	207	59	-30	4758	278	595	6	14
KS GOODLAND	GLD	214	30	-58	5582	373	751	7	16
KS TOPEKA	TOP	198	50	0	4998	230	721	5	17
KS WICHITA	ICT	186	52	-17	4801	479	615	11	15
KY LEXINGTON	LEX	145	12	-52	4430	152	732	4	20
KY LOUISVILLE	SDF	143	18	-50	4335	266	747	7	21
LA BATON ROUGE	BTR	25	-9	-68	1929	310	318	19	20
LA LAKE CHARLES	LCH	21	-13	-64	1592	61	87	4	6
LA NEW ORLEANS	MSY	22	-8	-59	1746	300	394	21	29
LA SHREVEPORT	SHV	44	-7	-69	2603	448	385	21	17
ME CARIBOU	CAR	228	-38	-28	7744	-220	473	-3	7
ME PORTLAND	PWM	200	-15	-3	5942	-237	371	-4	7
MD BALTIMORE	BWI	145	7	-2	4321	167	529	4	14
MA BOSTON	BOS	190	17	23	4765	38	492	1	12
MI ALPENA	APN	230	-20	-91	6913	-2	757	0	12
MI DETROIT	DTW	221	27	-51	5934	320	1111	6	23
MI FLINT	FNT	237	22	-47	6204	223	1314	4	27
MI GRAND RAPIDS	GRR	229	22	-67	6059	172	1124	3	23
MI HOUGHTON LAKE	HTL	235	-11	-77	6879	-41	923	-1	15
MI LANSING	LAN	234	27	-72	6361	419	1172	7	23
MI MARQUETTE	MQT	279	2	-68	7872	47	638	1	9
MI MUSKEGON	MKG	243	33	-40	6056	248	960	4	19
MI SAULT ST MARIE	SSM	246	-25	-106	7669	74	502	1	7
MN DULUTH	DLH	267	-11	-67	8050	-199	442	-2	6
MN INT'L FALLS	INL	259	-32	-54	8818	-163	914	-2	12
MN MINNEAPOLIS	MSP	231	0	-29	7235	254	1173	4	19
MN ROCHESTER	RST	248	8	-36	7451	304	1185	4	19
MN SAINT CLOUD	STC	246	-9	-32	7745	20	887	0	13
MS JACKSON	JAN	46	-10	-80	2568	304	306	13	14
MS MERIDIAN	MEI	59	0	-58	2650	312	669	13	34
MO COLUMBIA	COU	189	41	-19	4982	333	906	7	22
MO KANSAS CITY	MCI	204	55	-21	5247	513	836	11	19
MO SAINT LOUIS	STL	179	42	-27	4663	224	810	5	21
MO SPRINGFIELD	SGF	153	19	-17	4334	169	700	4	19
MT BILLINGS	BIL	146	-64	-82	5045	-362	637	-6	13
MT GLASGOW	GGW	161	-93	-85	7048	-581	323	-8	5
MT GREAT FALLS	GTF	151	-77	-107	6247	-164	551	-3	10
MT HAVRE	HVR	171	-72	-73	7023	-314	688	-4	11
MT HELENA	HLN	150	-75	-74	6483	-252	554	-4	9
MT KALISPELL	FCA	173	-50	-25	6732	-144	426	-2	7
MT MILES CITY	MLS	140	-82	-83	6416	-347	469	-5	8
MT MISSOULA	MSO	161	-46	-36	6484	20	589	0	10
NE GRAND ISLAND	GRI	226	37	-14	5922	207	549	4	10
NE LINCOLN	LNK	222	38	4	5881	217	787	4	15
NE NORFOLK	OFK	242	37	13	6323	151	811	2	15
NE NORTH PLATTE	LBF	192	-8	-79	6200	259	776	4	14
NE OMAHA	OMA	231	54	-5	6127	601	882	11	17
NE VALENTINE	VTN	190	-29	-81	6452	150	852	2	15
NV ELY	ELY	196	-18	-39	5802	-341	-218	-6	-4
NV LAS VEGAS	LAS	35	-31	-58	1947	-385	-334	-17	-15
NV RENO	RNO	132	-34	-67	4240	-643	-732	-13	-15
NV WINNEMUCCA	WMC	156	-23	-29	5119	-92	17	-2	0
NH CONCORD	CON	188	-26	-27	6245	-60	650	-1	12
NJ ATLANTIC CITY	ACY	157	3	8	4469	114	545	3	14
NM ALBUQUERQUE	ABQ	120	-1	-56	3753	-185	-252	-5	-6
NM ROSWELL	ROW	83	6	-48	3056	133	-150	5	-5
NY ALBANY	ALB	182	-20	-21	6007	79	699	1	13
NY BINGHAMTON	BGM	217	-2	-25	5939	-220	625	-4	12
NY BUFFALO	BUF	206	-3	-75	5847	137	899	2	18
NY NEW YORK	LGA	160	6	8	4344	91	519	2	14
NY ROCHESTER	ROC	215	9	-45	5764	90	868	2	18
NY SYRACUSE	SYR	214	8	-33	6147	403	806	7	15
NC ASHEVILLE	AVL	101	-17	-66	3899	115	366	3	10
NC CAPE HATTERAS	HAT	106	17	-1	2495	100	438	4	21
NC CHARLOTTE	CLT	61	-30	-75	3194	121	269	4	9
NC GREENSBORO	GSO	91	-14	-51	3675	166	280	5	8
NC RALEIGH DURHAM	RDU	90	-8	-39	3362	134	374	4	13
NC WILMINGTON	ILM	47	-25	-70	2386	65	104	3	5
ND BISMARCK	BIS	210	-44	-51	7580	-198	826	-3	12
ND FARGO	FAR	229	-37	-39	7920	-139	813	-2	11
ND WILLISTON	ISN	175	-86	-99	7477	-424	370	-5	5
OH AKRON-CANTON	CAK	199	17	-34	5358	20	911	0	20
OH CLEVELAND	CLE	206	23	-39	5609	345	1230	7	28
OH COLUMBUS	CMH	184	26	-37	5228	269	954	5	22
OH CINCINNATI	CVG	180	33	-26	5062	429	1200	9	31
OH DAYTON	DAY	207	45	-28	5501	524	1123	11	26
OH TOLEDO	TOL	228	37	-45	6039	408	1101	7	22
OH YOUNGSTOWN	YNG	203	11	-35	5656	86	1180	2	26
OK OKLAHOMA CITY	OKC	133	29	-40	3746	311	590	9	19
OK TULSA	TUL	118	16	-46	3540	89	494	3	16
OR ASTORIA	AST	108	-34	4	3766	-192	591	-5	19
OR BURNS	BNO	169	-26	-16	6591	963	804	17	14
OR MEDFORD	MFR	96	-37	-27	3587	-332	-24	-8	-1
OR PENDLETON	PDT	117	-25	-9	4515	102	431	2	11
OR PORTLAND	PDX	95	-35	-6	3354	-411	159	-11	5
OR SALEM	SLE	93	-46	-27	3419	-490	-78	-13	-2
PA ALLENTOWN	ABE	167	-2	-3	5115	80	683	2	15
PA ERIE	ERI	214	8	-32	5386	-215	816	-4	18
PA HARRISBURG	CXY	181	26	8	5081	408	998	9	24
PA PHILADELPHIA	PHL	153	6	-4	4560	216	683	5	18
PA PITTSBURGH	PIT	182	13	-48	5341	198	899	4	20
PA SCRANTON	AVP	182	-4	-27	5382	-57	505	-1	10
RI PROVIDENCE	PVD	173	-7	1	4753	-233	396	-5	9
SC CHARLESTON	CHS	18	-35	-69	1900	-134	117	-7	7
SC COLUMBIA	CAE	38	-30	-72	2667	193	165	8	7
SC GREENVILLE	GSP	73	-14	-59	3250	267	414	9	15
SD ABERDEEN	ABR	207	-34	-40	7205	-216	959	-3	15
SD HURON	HON	210	-20	-27	6804	-230	987	-3	17
SD RAPID CITY	RAP	164	-52	-82	6038	-87	664	-1	12
SD SIOUX FALLS	FSD	257	33	-19	7042	182	785	3	13
TN CHATTANOOGA	CHA	82	-15	-63	3508	224	536	7	18
TN KNOXVILLE	TYS	84	-10	-72	3600	254	463	8	15
TN MEMPHIS	MEM	73	-13	-60	3136	139	527	5	20
TN NASHVILLE	BNA	101	-3	-52	3666	221	699	6	24
TX ABILENE	ABI	65	4	-62	2713	251	220	10	9
TX AMARILLO	AMA	154	35	-58	4184	408	179	11	4
TX AUSTIN	AUS	21	-15	-79	1843	148	42	9	2
TX BROWNSVILLE	BRO	6	-1	-5	862	256	343	42	66
TX CORPUS CHRISTI	CRP	9	-9	-27	1252	296	283	31	29
TX DEL RIO	DRT	15	-11	-28	1709	230	263	16	18
TX EL PASO	ELP	58	-5	-36	2328	-198	-174	-8	-7
TX FORT WORTH	DFW	61	3	-67	2681	490	396	22	17
TX GALVESTON	GLS	21	-9	-42	1391	174	225	14	19
TX HOUSTON	IAH	34	2	-56	1773	274	223	18	14
TX LUBBOCK	LBB	109	13	-43	3299	67	-171	2	-5
TX MIDLAND ODESSA	MAF	66	1	-43	2711	205	136	8	5
TX SAN ANGELO	SJT	58	5	-37	2532	330	226	15	10
TX SAN ANTONIO	SAT	19	-13	-65	1837	281	119	18	7
TX VICTORIA	VCT	15	-8	-54	1447	207	199	17	16
TX WACO	ACT	50	2	-64	2369	346	285	17	14
TX WICHITA FALLS	SPS	82	5	-70	3164	338	431	12	16
UT SALT LAKE CITY	SLC	153	-7	-31	4978	50	339	1	7
VT BURLINGTON	BTV	224	-8	-26	6489	-224	793	-3	14
VA LYNCHBURG	LYH	107	-14	-50	3928	61	478	2	14
VA NORFOLK	ORF	110	7	2	3183	84	378	3	13
VA RICHMOND	RIC	107	-3	-16	3830	241	716	7	23
VA ROANOKE	ROA	102	-17	-47	3931	83	273	2	7
WA QUILLAYUTE	UIL	121	-40	-7	4524	-184	166	-4	4
WA SEATTLE-TACOMA	SEA	111	-33	6	3715	-317	214	-8	6
WA SPOKANE	GEG	149	-36	-16	5463	-217	298	-4	6
WA WALLA WALLA	ALW	101	-27	-10	4151	57	517	1	14
WA YAKIMA	YKM	119	-35	-1	4910	-167	310	-3	7
WV BECKLEY	BKW	128	-26	-77	5000	190	667	4	15
WV CHARLESTON	CRW	128	2	-50	4204	40	590	1	16
WV HUNTINGTON	HTS	124	0	-55	4316	167	743	4	21
WV PARKERSBURG	PKB	134	-4	-54	4406	36	743	1	20
WI GREEN BAY	GRB	247	11	-57	6939	32	776	0	13
WI LACROSSE	LSE	224	4	-49	6853	262	846	4	14
WI MADISON	MSN	224	5	-85	6747	177	765	3	13
WI MILWAUKEE	MKE	217	2	-64	6097	-37	810	-1	15
WY CASPER	CPR	180	-43	-70	6460	201	668	3	12
WY CHEYENNE	CYS	202	-22	-94	6276	376	584	6	10
WY LANDER	LND	198	-23	-44	7169	631	793	10	12
WY SHERIDAN	SHR	137	-85	-86	6221	-249	718	-4	13


HEATING DEGREE-DAYS FOR THE WEEK
PERCENT DEPARTURE FROM NORMAL (1951-1980)
BELOW NORMAL
ABOVE NORMAL
MAR 18 ... MAR 24 1984
BASED ON PRELIMINARY TELEGRAPHIC REPORTS
Dept. of Commerce - NOAA
HEATING DEGREE-DAYS ACCUMULATED FROM JULY 1, 1983
PERCENT DEPARTURE FROM NORMAL (1951-1980)
SAT MAR 24 1984
BASED ON PRELIMINARY TELEGRAPHIC REPORTS
Dept. of Commerce - NOAA
HEATING DEGREE-DAYS ACCUMULATED FROM JULY 1, 1983
PERCENT DEPARTURE FROM 1982-83
SAT MAR 24 1984
BASED ON PRELIMINARY TELEGRAPHIC REPORTS
Dept. of Commerce - NOAA

National Agricultural Summary

March 19 to 25

HIGHLIGHTS: Rain kept fields wet and activities at a minimum from eastern portions of the central and southern Plains through much of the East. Producers across the Corn Belt waited for drier weather so fieldwork could begin. Colder weather limited small grain and pasture growth from the central Plains into the southern Corn Belt. Fieldwork continued to lag in the Southeast where activities were limited to well-drained areas. Only 2 to 3 days were suitable for fieldwork in this region. Soil moisture supplies were rated adequate to surplus, except in the Southwest and West Texas where supplies were short.

Winter wheat was rated fair to good, except in western portions of the central and southern Plains and dryland stands in the Southwest where some poor conditions were reported. Wheat was greening in Montana and jointing from the central Plains through the Southeast. Some winterkill became evident as stands began growing. Corn planting was delayed by wet conditions across the South. Planting ranged from just starting in South Carolina to 44% finished in Texas. Progress lagged normal except in Texas. Sorghum planting reached 40% completion in Texas. Heavy rain delayed planting in some areas of the State. Rice planting was 9% complete in Texas and 10% finished in Louisiana. Cotton planting centered in Arizona and Texas. Tobacco seeding and transplanting gained momentum but lagged normal. Vegetable planting crept northward. Peaches were in full bloom from Texas to South Carolina. Cool temperatures limited pasture growth across much of the South. Livestock were in fair to good condition. Producers continued supplemental feeding because of excessive wet conditions in some areas.

SMALL GRAINS: Winter wheat was in fair to good condition, except in western portions of the southern and central Plains and dryland fields in the Southwest where dry conditions last fall and this spring left stands in poor condition. Some producers reported increased appearance of winterkill in some areas. Rain and wet fields restricted topdressing of small grains in most regions.

Kansas wheat producers reported some winterkill on terrace tops. Stands continued in fair to good condition with adequate soil moisture in the West and surplus moisture in the East. Light wind damage and disease infestations were reported. Farmers had planted 55% of the oats and barley. In Oklahoma, 15% of the winter wheat was jointing. Mild temperatures and additional rainfall provided good growing conditions for wheat and other small grains, except in the northern third of the State where cold weather limited growth. Producers sprayed to control weed and disease infestations in the North and West. Winter wheat was in mostly good condition. Small grains continued to improve in most areas of Texas. However, dryland wheat remained stressed on the Plains where soil moisture remains critical. Winter wheat began heading from the Blacklands through central and south Texas. Stands were rated mostly fair to good. Winter wheat began greening in Montana. The crop was in good condition with mostly adequate soil moisture and only light wind damage. Rain delayed small grain seeding and topdressing throughout the Corn Belt.

OTHER CROPS: Corn planting was further delayed by rain across much of the South. Planting crept as far north as South Carolina. Progress ranged from just beginning in South Carolina to 44% complete in Texas. Emerged plants were in good condition in Texas, however, few fields had emerged elsewhere.

Texas sorghum planting was 40% finished, compared to 44% last year and the average of 43%. Planting neared completion in central Texas and producers had good stands from the Coastal Bend to the Rio Grande Valley. Land preparation continued on the Plains.

Rice planting reached 9% and 10% completion in Texas and Louisiana, respectively. Good weather allowed active rice field preparation in California.

Tobacco transplanting started in South Carolina and was 8% finished in Georgia. Progress lagged in all States. Producers continued seeding plant beds further north. Maryland's tobacco auctions opened during the week with low prices reported.

Cotton planting was 2 weeks ahead of normal in Arizona. Seeding was 60% complete in Yuma County and underway in Maricopa and Pinal Counties. In Texas, planting was complete in the Coastal Bend area and the Rio Grande Valley. Growers were preparing to begin planting in central Texas and the Blackland. Statewide, 5% of the crop was planted, 2 percentage points behind normal. Planting was just beginning in California.

Maple syrup production gained momentum in northern areas.

FRUITS AND NUTS: Peaches were in full bloom from Texas to South Carolina. In Georgia, 95% of the trees were blooming. Peaches were in full bloom in South Carolina's Piedmont area and past full bloom in other areas. Producers reported no sign of cold damage to date. Peach trees were blooming across most of Texas and a good fruit set was expected Statewide.

Citrus trees in Florida had adequate moisture as the bloom continued. Fresh grapefruit picking was active, but Valencia orange harvesting slowed. Many citrus trees in the Rio Grande Valley of Texas began showing buds. Lemon, grapefruit, and Valencia orange harvesting continued with seasonal levels in Arizona. Some tangerines were picked in the Salt River Valley. Vineyards along California's north coast leafed out. Growers actively sprayed stone fruit to control diseases. Citrus harvesting continued active. Some granulation was reported in larger Navel oranges.

VEGETABLES: Cool, wet weather confined vegetable planting mainly to the extreme South. Florida's southern vegetable areas received heavy rain and gusty winds which caused some local damage. Total shipments rose 15% from the previous week. Snap beans, escarole, and endive volumes were steady, while celery, radishes, and squash declined in volume. The melon set and fruit sizing were very good. Strawberry picking neared peak levels.

Harvesting of cabbage, carrots, and spinach continued at a slower pace in Texas. Direct seeding and transplanting of onions got underway on the High Plains. Vegetable planting was widespread. Arizona's growers actively planted melon crops. A wide variety of vegetables was harvested in the Salt River Valley and Yuma area.

California growers harvested moderate to heavy volumes of broccoli and cauliflower from the Salinas-Watsonville and Santa Maria areas. Celery planting was active in both of these areas, while cutting continued active along the south coast. Lettuce harvesting was in full swing in the Desert and Kern District and should begin next week in central areas of the San Joaquin Valley. Strawberry picking was active along the south coast and near Santa Maria. Tomato planting advanced rapidly in the Sacramento and San Joaquin Valleys.

(continued on p. 19)

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by SRS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Temperatures averaged 2 to 4° below normal north and south and 1 to 3° above normal central. Rainfall totals were 1.00 to 2.00 in. north and south and 2.00 to 4.00 in. central.

Soil moisture adequate to surplus. Fieldwork: 3.3 days. Activities: care of livestock and poultry, generally farm chores and machinery repairs. Spraying and pruning fruit and pecan trees. Planting corn and some vegetables, and applying nitrogen to wheat. Pasture and stored feed, mostly short. Fieldwork behind schedule. Plowing 34%. Conditions: Livestock and pasture mostly fair, wheat, fair to good.

ARIZONA: Cool front late 21st and early 22nd spread light rain, snow across Central Basin, White Mountains northward, 4 in. snow Holly Lake. Moisture ranged traces to 0.25 in. Warm, dry remainder of State, partly cloudy north, sunny south. Seventy-nine days without rain in Phoenix. Average temperatures varied 1° below normal Winslow to 8° above Phoenix.

Cotton planting 2 weeks ahead of normal, 60% complete Yuma, well underway Maricopa, Pinal Counties. Seeding expected to start Mohave, Pima Counties by 31st. Seedbed preparation, pre-irrigation active. Wheat, barley good condition, practically all acreage jointing or further advanced. Over 50% Yuma acreage headed, 20% turning color. Alfalfa average, some weed, insect controls applied. Second cutting underway in Yuma. Safflower average, stands established. Spring lettuce packing reached peak volumes Yuma, increased Parker-Poston areas. Volumes increased Salt River Valley, practically all shippers packing. Growers in Picacho area expected to start harvest by 31st. Mixed vegetable harvests active Salt River Valley with beets, broccoli, cabbage, carrots, cauliflower, escarole, greens, rapini, green onions, parsley, radishes, spinach, and turnips harvested. Cauliflower harvest past peak Yuma, moderate volumes. Some broccoli, asparagus, cabbage harvested. Planting cantaloups, watermelons, honeydews active Yuma, Parker-Poston areas. Honeydews seeding complete Mohave County. Earlier melon plantings Yuma area in good condition, normal growth. Pecan harvest winding down. Prospects indicated good crops applies, peaches this season Willcox area. Lemon, grapefruit, Valencia harvests continued seasonal levels. Some tangerines harvested Salt River Valley. Groves good condition.

ARKANSAS: Temperatures near or slightly below normal. Scattered showers on 19th and 22nd through 24th. Mostly dry rest of week. Highest temperature 78°, lowest 26°. Most rainfall 2.82 in., least rainfall 0.12 in.

Most counties completed second application of fertilizer on wheat, but wet soil condition hampering some counties. Soil moisture more than adequate. Pastures growing, but limited grazing due to excess soil moisture. Livestock good condition.

CALIFORNIA: Continued warm throughout the State and with less precipitation than the previous week. Weekly mean temperatures several degrees above normal. Central Valley highest temperatures into the middle eighties and no freezing temperatures reported. Most of the precipitation early in the week and greatest amounts in the middle of the Sacramento Valley.

Good weather allowed rice field preparation. Wet fields slowed work. Small grains heading, some green chopped. Irrigation, herbicide aplication, San Joaquin Valley. Sugarbeet growth normal, harvesting Sacramento Valley. Bean fields worked, planting underway. Planting field corn. Pre-irrigation cotton, first fields planted. Alfalfa weevil-treated, silage first cutting. Safflower progressing. Alfalfa hay damaged from rain while drying. Warm, dry weather aided crop development and fieldwork. Bacon avocados nearly harvested. Dates pollinated in Riverside County. Discing, furrowing, irrigating, and spraying common in grape vineyards. North coast vineyards leafing out. Kiwifruit showing new growth. Growers treated thrips in stone fruits. Early cling peaches reached jacket stage. Pears set a good crop, sprayed for pyslla. Prunes sprayed for brown rot. Citrus harvest continues. Occasional granualtion in large Navel oranges. Almonds breaking jacket stage. Male pistachios breaking dormancy. Walnut catkins developing. Asparagus cutting active Delta, Salinas Valley, San Joaquin Valley, harvest Desert, Orange County winding down. Broccoli, cauliflower supplies heavy Salinas-Watsonville area, quality good. Santa Maria area heavy supplies broccoli, moderate supplies cauliflower. Carrot harvest continued Desert. Cantaloup, mixed melon planting continued San Joaquin Valley, growth well Desert. Celery planting active Salinas-Watsonville, Santa Maria-Oceano areas. Harvest active along south coast. Desert lettuce harvest peak, fair quality demand. Cutting full swing Kern District, harvest expected begin next week central San Joaquin. Planting, harvesting potatoes continues Kern, Riverside. Excellent conditions prevail. Movement fall potatoes continues Tulelake-Butte Valley. Strawberry harvest active south coast, Santa Maria. Seeding sweetpotato hotbeds continued San Joaquin Valley. Direct seeding, transplanting market tomatoes active San Joaquin Valley. Seeding processing tomatoes heavy pace Sacramento, San Joaquin Valleys. Recent rains improved rangeland conditions, however, grasses southern California too mature to receive maximum benefit. Calving, lambing continue. Sheep shearing in progress San Joaquin Valley. Movement of livestock summer grazing areas beginning.

COLORADO: The 1984 winter wheat in good condition. Wind damage light to normal. Winter freeze damage average. Barley seedings outside San Luis Valley in very good condition with 22% seeded; last, 17%; average 12%. Spring wheat and oat seedings outside San Luis Valley 13% and 8% seeded, respectively. San Luis Valley growers not yet planting. Livestock in good condition, statewide.

Light snow showers on eastern plains the 19th. Early spring rain on the 22nd and 23rd brought on average of 1.00 in. of moisture to the eastern slope and Arkansas Basin. Elsewhere, 0.25 to 0.75 in. common. Another storm on the 25th left 0.50 in. of moisture in and near eastern foothills.

FLORIDA: Two cold fronts passed through the State. The first on the 20th with general rainfall of 0.50 in. or less. The second front on the 25th produced patchy rain over northwest. An upper level disturbance late, 23rd over central and south dropped rains of 3.00 to 4.00 in. from Fort Myers through the Lake Okeechobee area. Otherwise, sunny skies, mild to warm temperatures prevailed.

Soil moisture mostly adequate, but surplus in south, central Gulf Coast areas following heavy rains, 23rd; some flooding of low areas. Corn planting continues, delayed due to wet soils. Early corn coming up. Tobacco transplanting active, planting conditions good. Small grains good growth, wheat showing signs of nitrogen leaching due to heavy rains some areas. Sugarcane good growth. Pastures continue to make moderate improvement as springlike weather sets in. Conditions remain mostly fair north, Panhandle, central localities, generally good, south. Cattle mostly good condition statewide. Most citrus trees improved. Moisture adequate. Open bloom continues. Remaining Valencias and grapefruit holding well. Valencia harvest slowing as processors and growers wait for higher ratios and pounds solids. Fresh grapefruit movement active. Warm days, mild nights prevailed most of week, vegetable farming areas. Rainfall up to 3.00 and 4.00 in. southern areas, 23rd. Winds gusty up to 50 m.p.h. some local damage expected. Overall vegetable shipments gained 15% over previous week. Crops gaining were cabbage, carrots, cauliflower, Chinese cabbage, sweet corn, cucumbers, lettuce, peppers, potatoes, strawberries, tomatoes. Crops with steady shipments were snap beans, escarole-endive. Celery, radishes, squash declined. Rains interrupted harvest. Strawberry picking nearing peak level. Cabbage cuttin gaining but good volume expected mid-to-late April. Watermelons making very good progress. Melon set, sizing very good.

GEORGIA: Temperatures 3 to 5° above normal. Highest temperatures upper 70's north, 80's central and south. Warmest 86° at Dublin 19th. Rain 1.00 to 2.00 in., except east where totals mostly under 0.50 in. Rain on 2 to 3 days. Heaviest 24-hour rainfall 2.95 in. at Augusta.

Soil moisture 53% surplus, 47% adequate. Average days suitable for fieldwork 3.0. Wet fields delaying land preparation and planting. Small grain and pasture fertilization active where soil condition permitted. Corn 33% planted, last year 15%, average 39%, very little emerged. Tobacco 8% transplanted, 6% last year, 23% average; condition 50% good, 50% fair. Watermelons 34% planted, last year 15%, average 39%. Wheat 54% jointed, last year 62%; 12% booted, last year 15%; condition 55% good; 43% fair. Other small grains 45% good, 43% fair, 12% poor. Pastures 53% good, 38% fair, 7% poor. Peaches 95% blooming, 80% last year.

HAWAII: Mostly sunny skies prevailed over the Islands. Very little precipitation occurred over the crop growing areas and some signs of stress beginning to show on selected crops. Irrigation restrictions were also imposed in one area due to low reservoir levels. Daytime temperatures continued to average above normal levels, and a daily record high was established on 21st.

Production of head cabbage steady and of heavy volume. Head lettuce supplies will also remain relatively heavy, although a decrease is expected this week. Chinese cabbage continues to be shipped to the U.S. mainland as production currently very heavy. Papaya production on the decline, but will remain above a year ago.

IDAHO: A series of weather disturbances moved across the State during the week. Total precipitation ranged from trace amounts in the southeast to 1.31 in. at Orofino. Northern precipitation was generally 0.25 in. above normal, while the remainder of the State ranged from 0.25 in. below to 0.33 in. above normal. Temperatures were 2 to 3° above normal in the north with the southwest near normal and the southeast from near normal to 6° below normal.

Wet field conditions caused by scattered rain showers and melting snow prevented fieldwork. Farmers were busy preparing equipment and determining seed and fertilizer requirements. Calving was more than 50% complete. Feed supplies were generally adequate, with shortages reported in several areas.

ILLINOIS: Temperatures 1 to 6° below normal. Precipitation 0.50 to 2.55 in., heaviest east and south.

Wheat condition fair to good. Livestock condition mostly fair.

INDIANA: Wet, cool week with highs 5 to 12° below normal. Above normal precipitation. Totals generally over 1.00 in. Range from 0.60 in. north to 2.30 in. southwest.

Soils slow to warm. Growing degree days 15 to 25 below normal. Muddy conditions kept virtually all eqiupment off fields. Outside work mostly confined to cutting wood, mending fences, and usual chores. Pastures just beginning to green up in the north. Snow cover virtually all gone exept for scattered patches on slopes.

IOWA: Cold and snowy early week. Temperatures moderated to near normal late week with considerable snowmelt. Soil temperatures 4 in. level at or near 30 to 33°. Weekly precipitation varied from less than 0.10 in. northwest to 0.50 in. east and south central.

Producers waiting for drier weather to firm up the soil so fieldwork can begin.

KANSAS: Major storms at beginning and end of week. Precipitation averaged 1.00 to 2.00 in. west and north, 2.00 to 3.00 in. southeast and over 4.00 in. parts of south central. Temperatures averaged 36 to 38° west and north, 43° southeast, ranging 8° below normal south central to 3 to 6° below normal elsewhere.

Wheat condition fair to good. About 55% oats and barley planted. Light wind damage southwest and central. Some winterkill on terrace tops. Light infestation of soil borne mosaic, tan spot, and speckled leaf blotch. A few cases of army cutworms. Adequate soil moisture west, surplus east. Ice storm damaged windbreaks and downed power lines. Loss of electricity made farm activities difficult. Some problems with calving and lambing due to ice and mud.

KENTUCKY: Temperatures varied widely. Highs average in 50's and lows in 30's. Rain most days with heaviest amounts of 0.50 to 1.00 in. occurring first of week. Rain totals generally from 1.25 to 3.00 in.

Farm activity continues to be primarily livestock care and feeding. Soil moisture adequate to surplus.

LOUISIANA: Rainfall amounts ranged from zero to 2.81 in. Average temperatures were normal to 3° below normal. High 81°, low 31°.

Soil moisture adequate. Days suitable for fieldwrok: 3.7. Activities included fertilization of cropland, spring plowing, planting corn and rice, and spraying livestock. Spring plowing 29% 1984, 36% 1983, 42% average. Rice planted 10% 1984, 6% 1983, 11% average; condition fair. Corn planted 33% 1984, 28% 1983, 26% average; condition fair. Vegetables fair condition. Strawberry harvest beginning. Wheat headed 12% 1984, 5% 1983, condition fair to good. Pastures and livestock rated fair.

MARYLAND AND DELAWARE: Maryland: Temperatures were mostly 2 to 3° above normal. Maximum temperatures reached the low to mid 60's. Minimum temperatures were in the 20's in extreme

west to the low to mid 30's elsewhere. Precipitation averaged 1.35 in. in extreme west to 0.45 in. over the remainder of the State.

Planting of green peas beginning in south. Fertilization of small grains getting started on a limited basis as fields dried enough for machine application.

Delaware: Temperatures averaged 1 to 2° above normal. High temperatures were in the low to mid 60's and lows were in the low 30's. Precipitation averaged 0.40 in.

Green pea planting getting started in south as soil temperatures warmed up and dried out enough to permit machinery. Small grains were spring fertilized as field dried enough for machine application.

MICHIGAN: Temperatures averaged near normal across the State. Heavy amounts of snow fell over much of the upper Peninsula. Flooding occurred over a large portion of the lower Peninsula as a result of a slow moving low pressure system that dropped 1.00 to 1.50 in. of rain.

Winter wheat and fruit trees still dormant. Sap flow in maple trees picked up after being slowed by the previous weeks cold spell.

MINNESOTA: Temperatures averaged near normal to 2° below normal for the southern third of the State and 2 to 7° above normal elsewhere. High: 53°, low: 1°. Precipitation averaged 0.12 to 0.35 in. below normal. Greatest weekly total: 0.65 in. Snowfall averaged 2 to 5 in. for southeast and south central; elsewhere, zero to 1 in. snow depths at weeks end averaged 8 to 10 in. northeast and north central and zero to 2 in. elsewhere.

MISSISSPPI: Temperatures near normal, extremes 29 and 85°. Tornadoes reported on the 19th and 24th. Greatest weekly rainfall 3.63 in.

Soil moisture was surplus in the northern half of the State and adequate in the southern half. Fieldwork: 2.7 days suitable, 2.0 1983, 2.7 average. Plowing 25% completed, 24% 1983, 38% average. Corn acreage 13% planted, 13% 1983. Watermelon acreage 9% planted. Wheat condition fair to good; 28% jointing, 28% 1983. Hay supplies remain short. Feed grain supplies short to adequate. Pasture and livestock condition fair.

MISSOURI: Temperatures remained cool averaging 5 to 8° below normal. Rainfall was abundant averaging over 1.00 in. across the State, except the Bootheel where the average was around 0.75 in. Over 4.00 in. fell in parts of west central plains and over 3.00 in. fell at Cape Sirardeau.

Snow and rainfall have kept fields wet and activities at a minimum. Pastures have not started growing yet.

MONTANA: Very mild week with temperatures averaging 7 to 14° above normal. Many areas had maximum temperatures in the 60's with some 70's in eastern areas. Precipitation moderate over west and southwest, mostly light in eastern areas.

Winter wheat in good condition and greening in most areas. Wind damage light. Soil moisture mostly adequate. Calving and lambing about 45% complete.

NEBRASKA: Precipitation over last weekend heavy with around 0.40 in. over northwest increasing to 1.50 in. over south central and southeast. Temperatures ranged from 5° above normal northwest to 4° below normal southeast.

NEVADA: Mostly dry and warm. Only trace precipitation recorded one station. Average temperatures ranged from near normal to 10° above. Extremes: 82 and 2°. Highest wind gusts ever recorded occurred extreme south midweek.

Dry weather aiding seedbed preparation all areas. Good progress in potato producing areas. Winter grains greening southern half of State.

NEW ENGLAND: Temperatures average 1 to 3° above normal. Highest was 57° on the 21st at West Burke, VT. and at Woonsocket, RI on the 23rd. Lowest was 10° early morning at Aroostook County, ME. on the 19th. Over 1.00 in. of precipitation fell east of the Connecticut Valley, most in northern NH and over south and central ME. Greatest measurement was 3.15 in. at Waterville, ME. As much as 1 in. of snow fell very early in the week, mostly over the far north.

Farmers sugaring throughout the week. Maine growers shipping potatoes.

NEW JERSEY: Temperatures were slightly below normal. Extremes were 23° on the 24th and 63° on the 21st. Weekly rainfall averaged 0.44 in. north, 0.56 in. central and 0.83 in. south. The heaviest 24-hour total was 0.99 in. on the 25th to 26th. Estimated soil moisture, in percent of field capacity, averaged 100% north, 98% central and 95% south. Four inch soil temperatures averaged 36° north, 40° central and 43° south.

Soil moisture continues to be adequate to excessive. Soil preparation slow.

NEW MEXICO: Average temperatures slightly below normal in the northeast and near or slightly above normal elsewhere. Minimum temperature 13° in western mountain area, maximum 84° in southeastern plains. One storm system crossed the State at midweek and another on the weekend. Precipitation was light and generally confined to the northern half of the State where most locations received less than 0.50 in.

Irrigated wheat and barley fair to good condition, dryland mostly poor. Alfalfa fields greening up with warmer temperatures. Chile planting continues in Mesilla Valley. Lettuce and onion crops in good condition. Asparagus harvesting begain during the week. Rangeland rated very poor to fair. Cattle and sheep in fair to good condition with continued supplemental feeding. Main activities include field preparation and vegetable planting.

NEW YORK: Cold at beginning, moderate by midweek. Average temperatures cooler than usual, mainly in 30's Upstate to low 40's on Long Island. Precipitation near normal in upper Hudson Valley, Champlain Valley and Adirondacks, below normal elsewhere.

Normal farm chores and maple sap gathering.

NORTH CAROLINA: Temperatures slightly above normal. Precipitation heaviest over the mountains and north central part of the State.

Soil moisture 33% adequate, 67% surplus. Days suitable for fieldwork; 2.4. Condition: Wheat 22% fair, 74% good, 4% excellent. Oats 3% poor, 33% fair, 61% good, 3% excellent. Barley 3% poor, 30% fair, 65% good, 2% excellent. Rye, 28% fair, 72% good. Pasture 7% poor, 35% fair, 58% good and tobacco beds 20% fair, and 80% good. Farm feed supplies: Hay and roughage 36% short, 62% adequate; feed grains 27% short, 73% adequate. Plantings: Irish potatoes 48%, 1983 30%, average 41%. Major farm activities: Topdressing small grains and pastures, preparing

and planting tobacco plant beds, general farm maintenance, land preparation for spring planting, tending livestock and planting spring potatoes.

NORTH DAKOTA: A hint of spring past week with above normal temperatures but below normal precipitation. District averages from 3.2° above normal southeast to 10.7° above northwest. Temperature extremes from 67° on the 24th to -8° on the 10th. Precipitation light and spotty. All districts well below average, many stations reporting no precipitation or just a trace. District averages from 0.06 to 0.18 in. below normal. Most precipitation was 0.30 in. on the 18th. Warmer temperatures nearly depleted remaining snow cover. Topsoil wet most areas, and still frozen under top few inches. Calving and lambing progress good during past week. Flooding of Red River Valley not considered likely under present conditions. Soil moisture statewide best in many years.

OHIO: Temperatures warm early week then colder. Lows close to normal, daytime highs as much as 9° below normal. Extreme readings from teens to 70's. Precipitation widespread and above normal. Totals from 1.00 to 2.59 in.

Excess field moisture over most of the State with some flooding reported. Cloud cover kept heating to a minimum. Soil temperatures 4 in. bare from upper 30's to lower 40's. Winter wheat fair condition.

OKLAHOMA: Temperatures averaged above normal across State, ranging from 1° above normal southeast to 8° above normal north central. Precipitation ranged from 1.30 in. southwest to 2.47 in. north central.

Mild temperatures and additional rainfall provided good growing conditions for wheat and other small grains except northern third where cold weather limited growth and development. Wet fields throughout State hindered topdressing. Weeds and soil borne mosaic problem in north and west with producers using control measures. Wheat in mostly good condition. Pastures greening but still in fair condition. Livestock in good to fair condition. Wheat jointing: 15%, 25% 1983, 20% average.

OREGON: Spring began with temperatures 4° above normal throughout the State. Up to 2.00 in. of precipitation fell west of the Cascades. Amounts ranging from 0.10 in. fell in the southeast with 0.90 in. in the central areas.

Soil moisture supply mostly surplus. Winter wheat in good condition, although some reseeding being done east of Cascades. In west, fertilizing and spraying nearing completion. Spring grain seeding continues. Potato planting also continuing in Hermiston-Boardman area. Extent of winter freeze damage to strawberries still not apparent. Pastures beginning to grow in west, need warmer weather in east. Livestock in good condition.

PENNSYLVANIA: Temperatures warmed up from the week before, but were still below seasonal normals. The average temperature of 37° was 3° below normal. Extremes were 76 and 15°. The average precipitation of 0.59 in. was 0.22 in. below normal. Heaviest amounts were in the south central sections during the middle of the week. Precipitation was mainly rain except during the later part of the week in the west and north where some snow fell.

Dairy farmers hoping that they can get cows out on pasture soon because feed and hay have been in short supply.

PUERTO RICO: Island average rainfall 0.65 in. or 0.16 in. above normal. Highest weekly total 3.38 in. Highest 24-hour total 2.80 in. Temperature averaged about 77 to 76° on coasts and 70 to 69° interior divisions. Mean station temperature ranged from 78.7 to 62.7°. Extremes 92 and 46°.

SOUTH CAROLINA: Temperatures averaged 2 to 4° warmer than usual. Quite warm beginning and end, cooler during midweek. Rainfall heavier than normal occurring early and over weekend. Some hail and wind damage east over weekend.

Soil moisture adequate to surplus. About 3 days suitable for fieldwork. Corn planting underway in southern and eastern counties; wet soils delaying land preparation and planting other areas. Watermelon planting underway in south, earliest plantings emerging. Tobacco plant beds in good condition, transpalnting just starting. Wet fields delaying nitrogen applications to small grains, yellowing evident in low areas; some earlier cold damage showing up. Peaches in full bloom piedmont, past full bloom other areas. No sign of cold damage to date.

SOUTH DAKOTA: Average temperatures 10 above to 5° below normal. Extremes: 71 and 11°. The western 2/3 of the State continued to have below normal precipitation while the eastern 1/3 was near or above normal.

Calving in full swing across the State. Cold, wet weather keeping farmers out of the fields. Scattered reports of winterkill.

TENNESSEE: Two fronts passed across the State, the first on the 20th, the second on the 25th. Because of the two frontal passages, precipitation in the form of rainfall was plentiful. Amounts ranged from 1.00 in. in the west up to 2.00 in. in the east. Temperatures averaged near normal and ranged from 80° (Knoxville) to 28° (Bristol). Averages ranged from 50 to 55°.

Normal farm chores were the main farm activities.

TEXAS: First half week high pressure most State. On 22nd, 23rd upper level system northern portions, widespread rain north, southeast Texas. Mild weather 24th, 25th. Temperatures close normal most areas. Precipitation near normal southwestern, southern tip State; below normal east, north central Texas, High, Low Plains.

Crops: Varied amounts rain as early spring front through State late week. Moisture accumulations small; planted crops, ranges, pastures benefit. Some hail accompanied front, causing light damage budding fruit trees north central Texas, Cross-Timbers. High winds further depleted soil moisture Plains. Sorghum planting neared completion central Texas. Earlier planted sorghum up good stands. Some greenbugs untreated fields. Northern Blackland, heavy rains further delayed planting. Good stands from Coastal Bend to Rio Grande Valley. Land preparation Plains. Corn central, east, south Texas good growth, up good stands. Corn producers Plains virtually completed land preparation. Planting in area may begin early. Lack of adequate soil moisture continues to be a problem. Corn planting Blacklands virtually complete before rains. Remainder completed as soil dries. Central, south Texas fields good stands. Rio Grande valley making good progress. Fields hit by hail along upper coast good come back. Cotton planting complete Rio Grande Valley, Coastal Bend. Cotton good progress both areas. Herbicides applied Plains, Trans-Pecos.

Planting soon begin central Texas, Blacklands. Some fields already planted. Small grains continue improve most areas. Dryland wheat remains stressed Plains. Irrigated wheat looks good; pastures remain short. Blowing winds, sand some damage wheat fields. Soil moisture remains critical. Cattle moved off wheat fields Cross-Timbers allow grain production. Wheat Blacklands through central, south Texas heading out. Crop excellent growth warmer temperatures, small amounts rainfall. Oats good progress. Statewide wheat condition 67% of normal, compared with 83% year ago. Current conditions 6% excellent; 29% good; 53% fair; and 12% poor. Rice planting begun along Gulf Coast. Many fields too wet to plant. Planting run slightly behind this year unless open weather holds out. Planting sugarbeets begun Plains limited basis.

Cotton planted 5% 1984, 5% 1983, 7% average. Rice planted 9% 1984, 8% 1983, 15% average. Sorghum planted all purposes 40% 1984, 44% 1983, 43% average. Corn planted all purposes 44% 1984, 38% 1983, 32% average.

Commercial vegetables: Rio Grande Valley, vegetables good progress. Harvesting carrots, cabbage active. Many citrus trees budding out. San Antonio-Winter Garden, spinach, cabbage, carrot harvest continues, however, slower pace. Onions good progress. Harvest two or three weeks. East Texas, sweetpotato bedding continues. Watermelon, tomato planting begin soon. High Plains, direct seeding onions is proceeding, transplants get underway. Potato planting full swing. Trans-Pecos, chili planting beginning. Onions slightly moisture stressed; overall, good shape. Peach trees blooming most State.Some hail damage Cross-Timbers. Good fruit set expected statewide. Some spraying taking place. Pecan trees bud central, southern portions State. Northern sections, no bud break occurred. Some freeze damage younger trees.

Range and livestock: Ranges, pastures new growth, providing good grazing. Irrigated wheat fields grazing Plains, dryland fields not. Other grasses, weeds making good growth. Central Texas, Edwards Plateau, new pasture growth appearing, ranges continuing green up. Moisture still needed go into spring, summer good shape. Recent helped. Cattle remain good condition. Lambing nearing completion, smaller kids reported. Prices continue good. West Texas livestock fair to poor condition due severe drought conditions.

UTAH: Precipitation moderate to heavy in mountainous areas, light moderate rest of State. Temperatures average 2° below normal north, about normal south. Stations ranged 4° below to 3° above normal.

Most farmers waiting for land to dry out before moving onto it with heavy equipment. Land prepartion for onions and hardy vegetables in progress. Last of potatoes an onions moving from storage. Few apples still remaining. Early season grasses on open ranges greening up, making little growth. Most livestock in good condition. Spring calves and lambs doing fine.

VIRGINIA: Wet across State. Central sections received over 3.00 in., amounts elsewhere around 0.50 to 2.00 in. Temperatures a few degrees above normal. Highs reached into 60's and 70's with overnight lows near or below freezing for short period over extreme portions of north and west. Winds strong through middle and last portion of period.

Topsoil moisture increased to 44% adequate, 56% surplus. Days suitable for fieldwork increased to 2.0. Field activities still limited to well-drained areas. Overseeding pastures and hay, fertilizer and lime applications, herbicides applications and seeding grasses, spring grains and alfalfa progressing slowly. Fruit prospects still look good, pruning winding down. Potato seeding about 33% complete, 22% last year, 36% average. Tobacco plant bed seeding 76% complete.

WASHINGTON: Predominantly warm westerly flow aloft coupled with strong system during midweek produced above normal temperatures and precipitation. Rain fell nearly every day west of Cascades with greatest amounts recorded on 20th with passage of strong late winter storm. System also caused considerable rainfall late 20th through 21st east of Cascades.

Wet conditions prevailed western counties hindering field activities. Some fertilizing and spraying of raspberries in progress as weather permitted. Cattle being confined to feedlots due to excessively wet pastures. Eastern counties, planting spring wheat, barley and potatoes continued, weather permitting. Some aerial weed spraying in progress. In orchards, application of dormant sprays, fertilizers and herbicides and general cleanup main activities. Range conditions good. Calving and lambing continue.

WEST VIRGINIA: Temperatures averaged 2.5° above normal across the State except for the northwestern section where temperatures were nearly 1° below normal. The high temperature was 79° in Morgantown and the low 16° at Elkins. Precipitation averaged well above normal in the central, north central and northwestern areas of the State, while remaining portions were slightly below normal.

Soil moisture surplus to adequate. Days suitable for fieldwork averaged 1.5. Main activity: General maintenance. Feed supplies adequate to short.

WISCONSIN: A slow moving storm moved into the State on the 19th bringing a combination of snow, sleet, freezing rain and rain. A mixed combination of precipitation generally continued across the State before ending as snow in the southeast. Accumulations of new snow ranged from 1 to 5 in. The second half of the week was generally fair with temperatures slowly warming through the 24th and 25th.

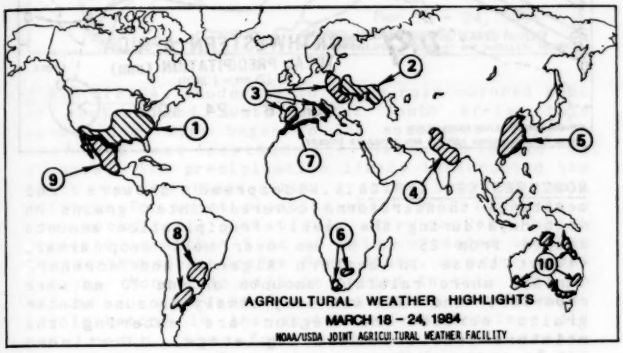
Maple sap for syrup started flowing on the 21st in north central areas and earlier along the lakeshore. Cool nights and sunny days have facilitated the flow of sap.

WYOMING: Temperatures above normal. Precipitation much above normal in southeast quarter. Elsewhere, near or below normal.

Winter wheat continues mostly good condition. Livestock mostly good condition. Supplemental feeding continuing in snow covered areas. Frequent snows and cold temperatures taking toll on calves, with scours and pneumonia reported. No high death loss of livestock experienced, however.

International Weather and Crop Summary

March 18 to 24



HIGHLIGHTS:

1. UNITED STATES ... Wetness from eastern parts of the central and southern Plains to the Atlantic Coast further delays corn planting and field preparation, while warm, dry conditions speed planting over the Southwest. Cold slows winter grain development from the central Plains into the Corn Belt.

2. WESTERN USSR ... A cold snap produces the potential for isolated winterkill across southern winter wheat areas. Moisture supplies increase in the eastern Ukraine and central Black Soils.

3. EUROPE ... Widespread showers benefit winter grains in Spain and southern Italy. Unseasonably cold air covered eastern winter grain areas early in the week.

4. SOUTH ASIA ... Moderate rain aids northern wheat areas. Dry weather favors maturing southern wheat.

5. EASTERN ASIA ... Moderate to heavy rain improves conditions for the early rice crop in the southeast. Winter wheat continues to break dormancy and would benefit from more rain.

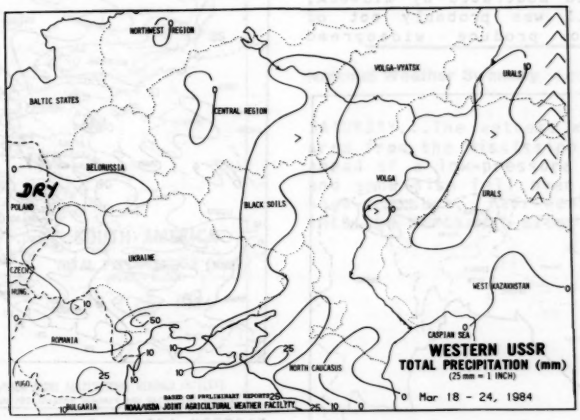
6. SOUTH AFRICA ... Moderate rain delays early corn harvesting but increases soil moisture for wheat planting.

7. NORTHWESTERN AFRICA ... Widespread, timely rains benefit winter grains in the heading stage over much of the region.

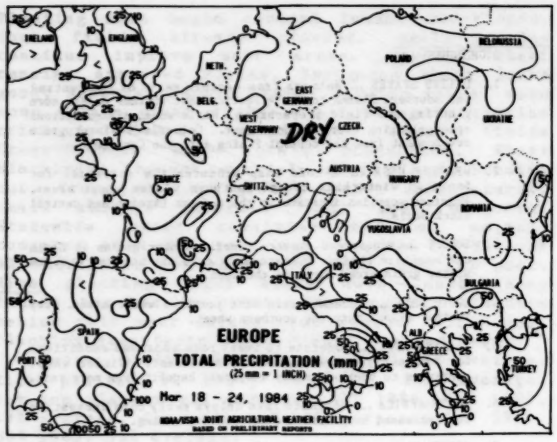
8. SOUTH AMERICA ... Nearly a week of sunny, mild weather favors harvesting of Argentina's summer crops, but scattered showers and thunderstorms over the weekend cause additional harvest delays. Rain also interrupts soybean harvesting in southern Brazil, but only light showers in Sao Paulo allow cotton harvesting to continue.

9. MEXICO ... Temperatures, dropping to near seasonal levels, reduce plant stress in the north, while light showers fall on some southern croplands.

10. AUSTRALIA ... Favorably dry weather aids maturing and early harvesting of summer crops in eastern Australia. Showers over the weekend in southern and eastern wheat areas and during the week in the west improve preseason moisture supplies. Tropical showers continue in the north, with generally light rain falling over sugarcane areas of eastern Queensland.

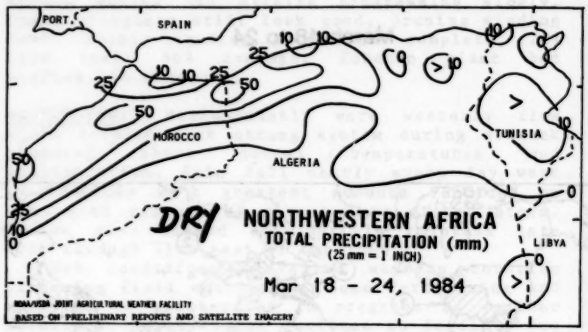


WESTERN USSR...Beneficial precipitation in the form of snow increased moisture supplies in a narrow band which stretched northward from the eastern Ukraine through the central Black Soils, and into the Central and Volga Vyatsk Regions. Light precipitation also benefited winter grain areas in the western portion of the North Caucasus. Most winter grains over the remainder of the region received little, if any, precipitation. A cold snap early in the week covered Belorussia and the western Ukraine. The cold weather then spread eastward across the Ukraine with temperatures moderating to seasonable levels by week's end. Minimum temperatures around -15° C covered the western Ukraine for 3 consecutive days, while in the central and eastern Ukraine minimum temperatures around -12° C occured for 2 consecutive days. Overall, the impact of the cold snap should have been minimal, as a protective snow cover probably existed in the western Ukraine, while the cold weather was not of sufficient duration to produce widespread winterkill in the eastern Ukraine. Isolated winterkill is possible and weather conditions produced the potential for frost heaving.

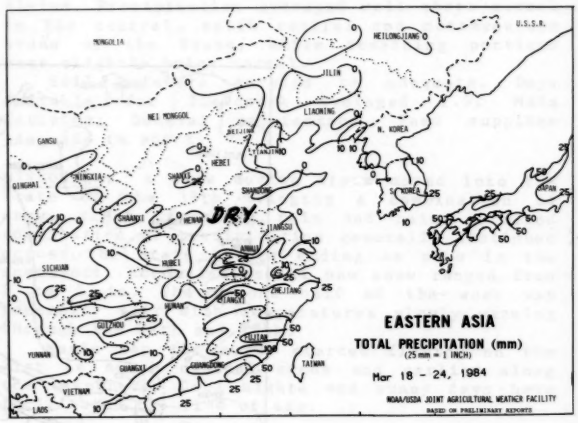


EUROPE...A series of storm systems moved eastward across the Mediterranean, producing widespread showers throughout the Iberian Peninsula, southern Italy, and southeastern Europe. The moisture was particularly beneficial to Spain, increasing low-moisture supplies. Showers also covered winter grains in France and England by week's end. The dry weather pattern, which has covered winter grain areas across the northern portion of the region since early March, continued. Moisture accumulations since December are near normal in West and East Germany but below- to well-below normal in Poland, Czechoslovakia, Austria, and Hungary. Unseasonably cold air pushed southward into winter wheat areas in eastern Europe early in the week. The cold snap followed a period of unseasonably warm weather in early March, which reduced snow cover over these areas and caused the dormant crop to begin to lose hardiness. Temperatures over the area moderated by midweek, therefore, the cold spell was probably not of sufficient duration to produce widespread winterkill.

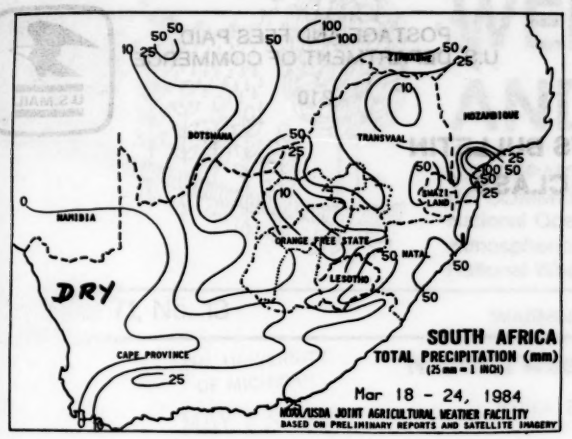
SOUTH ASIA...Seasonably dry weather covered most of India this week. However, moderate rain in northern Pakistan and India was beneficial for that portion of northern wheat which is in the late grain filling stage. Most wheat is maturing in central India and harvesting is beginning in southern minor wheat areas. Dry weather during the past several weeks has favored the maturing wheat. Temperatures averaged slightly below normal in northern India this week, while the south was seasonably warm. Clear weather in southern peninsular India allowed soils to dry, following above-normal rains during February and early March. Summer rice is in the late heading and early grain filling stages in eastern India.



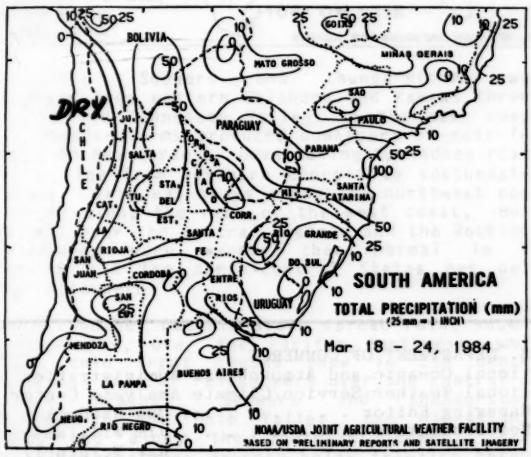
NORTHWESTERN AFRICA...Widespread showers and scattered thunderstorms covered winter grains on most days during the week. Precipitation amounts ranged from 25 to 50 mm over most crop areas, except those in eastern Algeria and northern Tunisia where rainfall amounts around 10 mm were reported. The rain was very timely because winter grains across the region are entering the moisture-sensitive heading stage. Continued timely rains will be needed through April to meet the crop's moisture demand.



EASTERN ASIA...Precipitation increased in southern China this week. The onshore flow of moist air from the South China Sea produced heavy rain (50 to 100 mm) in Fujian, Guangdong, and Jiangxi. Lighter showers covered most of the remaining rice areas, benefiting early vegetative growth of rice. Temperatures averaged near normal in the extreme south, but slightly cooler than normal in most of eastern China. Freezing temperatures south of the Yangtze River occurred at high elevations but had little impact on spring growth. Light showers in the Yangtze Valley aided early growth of winter wheat. Additional precipitation in northern winter wheat areas would be beneficial because the crop is breaking dormancy and will require more moisture.



SOUTH AFRICA...Moderate to heavy rain covered most of eastern and south-coastal South Africa this week. The rains began in the southwest early in the week and reached the Maize Triangle by midweek. The precipitation likely interrupted the early corn harvest, but greatly improved soil moisture for wheat planting which will begin in a few weeks. A relatively dry pocket, which received less than 5 mm of rain, extended through the northwestern Orange Free State, a major wheat region. More rain will be needed in this area to ensure adequate planting conditions. Precipitation in the southern Cape Province did not reach the far western wheat areas. Temperatures remained above normal for most of the week, but cooled late in the week with the arrival of precipitation.



SOUTH AMERICA...Sunny skies and slightly above-average temperatures for nearly a week allowed some harvesting of coarse grains and sunflowers in Argentina's major crop areas. However, scattered showers and thunderstorms returned to the area over the weekend causing additional interruptions in the rain-delayed harvest in central Buenos Aires, southern Santa Fe, and cotton areas of western Chaco and Formosa. Sunflowers have been damaged by persistent episodes of wetness, while quality reductions are likely in the mature coarse grain crops. The plentiful moisture aided soybean pod filling, but drier weather will be needed to mature the crop.

In Brazil, locally heavy showers fell throughout the soybean areas from Parana southward to western Rio Grande do Sul. The rain slowed soybean harvesting which is over 30-percent complete in Parana and delayed initial harvesting in the south where only about 5 percent of the crop has been harvested. Mostly dry weather in Sao Paulo and Mato Grosso do Sul aided cotton and soybean harvesting.

MEXICO...Temperatures dropped to near seasonal values over the north, somewhat reducing the stress on droughty rangeland grasses and rainfed field crops. Unsettled weather, with cloudiness and scattered, mostly light showers, developed across parts of the south during midweek. Rainfall was generally too light to significantly improve soil moisture except in isolated spots. Dryness generally continued over most of the country, benefiting harvesting and fieldwork, but increasing the need for frequent irrigation.

National Weather Summary (continued from front cover)

SATURDAY...The wetness moved eastward, covering the area from the Mississippi Valley to the Applachians, ahead of a low-pressure frontal system. Light rain and snow also fell over parts of the Northwest. A high-pressure, fair-weather system finally moved into the Northeast after 3 days of storminess.

(continued from p. 11)

PASTURES AND LIVESTOCK: Cool temperatures slowed southern pasture growth and delayed growth in central regions. Excessively wet conditions forced livestock producers to continue supplemental feeding in many areas. Feed supplies were mostly adequate to short while hay supplies continued tight. Livestock were in fair to good condition. Calving and lambing continued. Some newborn death losses were reported due to the cold, wet weather in some areas.

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